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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:CM:86:SER:OG	28:CM:88:ASP:OD1	2.22	0.57
30:CP:51:LEU:HD13	30:CP:78:MET:HE2	1.87	0.57
32:CS:257:ARG:HD3	65:CS:1101:ADP:C6	2.39	0.57
53:UT:740:VAL:O	53:UT:746:TRP:NE1	2.25	0.57
53:UT:1878:MET:SD	53:UT:1925:SER:OG	2.62	0.57
22:CG:221:LYS:N	51:C2:180:U:O2'	2.35	0.57
32:CR:311:PHE:O	32:CR:386:VAL:HA	2.05	0.57
32:CS:279:ASN:OD1	32:CS:468:SER:OG	2.21	0.57
53:UT:976:LEU:HD21	53:UT:995:LEU:HD11	1.85	0.57
4:UD:198:ASN:OD1	4:UD:215:ARG:NH1	2.37	0.57
7:UJ:634:ALA:HA	7:UJ:643:THR:HG22	1.87	0.57
7:UJ:1284:LEU:HA	7:UJ:1287:LEU:HD12	1.85	0.57
9:UL:222:ALA:HB3	9:UL:235:ALA:HB3	1.85	0.57
23:CH:215:VAL:HA	23:CH:285:THR:HA	1.87	0.57
32:CR:387:VAL:HG22	32:CR:409:PHE:HB2	1.86	0.57
32:CR:792:TYR:O	32:CR:795:ARG:CB	2.53	0.57
53:UT:1237:LEU:O	53:UT:1248:ASN:ND2	2.35	0.57
1:UA:155:ARG:HD2	1:UA:199:VAL:HA	1.86	0.57
1:UA:270:LEU:HD13	1:UA:284:MET:HE3	1.85	0.57
1:UA:558:ARG:NH2	51:C2:62:A:OP2	2.37	0.57
9:UL:40:ILE:HG13	9:UL:49:VAL:HG12	1.86	0.57
10:UM:248:LEU:HD21	10:UM:280:VAL:HG22	1.87	0.57
10:UM:479:LEU:HG	10:UM:539:ARG:HH22	1.68	0.57
15:UU:454:THR:HG22	15:UU:455:THR:HG23	1.87	0.57
22:CG:482:SER:OG	22:CG:483:TRP:N	2.38	0.57
47:Co:372:ARG:NH2	47:Co:383:LYS:O	2.37	0.57
53:UT:1511:PHE:HD1	53:UT:1515:HIS:HE1	1.51	0.57
2:UB:3:GLY:O	2:UB:8:ARG:NH1	2.37	0.57
2:UB:606:HIS:HA	2:UB:652:ARG:HH22	1.69	0.57
4:UD:506:ARG:NH1	4:UD:507:VAL:O	2.38	0.57
7:UJ:1426:ALA:HA	7:UJ:1430:PRO:HD3	1.86	0.57
14:UR:396:GLY:HA3	14:UR:420:VAL:HG23	1.86	0.57
23:CH:209:ASN:O	23:CH:350:ARG:NH1	2.36	0.57
29:CN:32:LYS:HA	29:CN:36:ARG:HH22	1.69	0.57
30:CP:139:ARG:NH1	30:CP:189:MET:O	2.35	0.57
32:CS:316:SER:HB3	32:CS:319:ASN:HB2	1.86	0.57
50:C1:928:G:OP2	60:CZ:537:ARG:NH2	2.38	0.57
4:UD:684:ASP:HB2	4:UD:734:ARG:HD3	1.87	0.57
10:UM:271:MET:HG2	10:UM:273:ARG:HH22	1.69	0.57
10:UM:289:MET:O	10:UM:300:ILE:HA	2.04	0.57
52:CW:11:VAL:HG22	52:CW:359:ILE:HG12	1.87	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:UB:759:HIS:O	2:UB:762:THR:OG1	2.20	0.57
4:UD:406:ASP:HB3	4:UD:409:ALA:HB2	1.86	0.57
9:UL:712:VAL:HG12	9:UL:722:VAL:HG22	1.87	0.57
10:UM:368:ARG:HH12	10:UM:428:LEU:HD13	1.69	0.57
13:UQ:601:ARG:NH2	55:UE:30:GLU:OE2	2.38	0.57
13:UQ:615:PHE:N	13:UQ:629:ILE:O	2.37	0.57
28:CM:72:MET:HE3	28:CM:333:MET:HG2	1.86	0.57
30:CP:93:LEU:HD13	30:CP:96:ARG:HH12	1.70	0.57
37:Cd:57:ASP:HA	37:Cd:106:LEU:HA	1.86	0.57
40:Cg:136:LYS:H	59:CY:250:GLY:HA3	1.69	0.57
53:UT:1274:GLN:HG3	53:UT:1276:ASP:H	1.70	0.57
59:CY:98:LYS:HB2	60:CZ:453:LEU:HD21	1.87	0.57
55:UI:189:ASP:HB3	55:UI:192:LEU:HD13	1.87	0.57
27:CL:571:VAL:HG21	27:CL:645:PRO:HB3	1.86	0.57
32:CS:829:LEU:HD11	32:CS:923:PHE:HD1	1.69	0.57
7:UJ:77:GLN:HE21	14:UR:62:ALA:H	1.53	0.56
7:UJ:323:GLN:NE2	7:UJ:364:ASP:OD2	2.38	0.56
10:UM:344:VAL:HG12	10:UM:368:ARG:HG2	1.87	0.56
11:UN:301:PRO:HG3	53:UT:2125:THR:HB	1.86	0.56
21:CE:64:ILE:O	21:CE:67:HIS:CE1	2.57	0.56
23:CH:86:VAL:HG23	23:CH:89:MET:HB3	1.88	0.56
48:Cp:13:VAL:O	48:Cp:52:ASN:HA	2.05	0.56
4:UD:192:ILE:HG12	4:UD:202:VAL:HG12	1.87	0.56
4:UD:319:ARG:NH2	50:C1:66:G:OP1	2.38	0.56
15:UU:883:VAL:O	15:UU:887:GLY:C	2.48	0.56
26:CK:105:LYS:NZ	50:C1:1743:C:OP2	2.38	0.56
29:CN:35:LYS:NZ	29:CN:200:GLU:O	2.38	0.56
29:CO:158:LYS:HB2	29:CO:161:LYS:HE2	1.86	0.56
32:CS:479:ARG:HE	65:CS:1101:ADP:H4'	1.70	0.56
32:CS:513:PRO:HD3	52:CW:274:ARG:HE	1.69	0.56
50:C1:678:A:H5''	50:C1:679:A:H5''	1.86	0.56
53:UT:431:SER:OG	53:UT:472:ARG:NH2	2.32	0.56
4:UD:316:VAL:HG12	13:UQ:349:ARG:HG2	1.87	0.56
7:UJ:786:HIS:HD2	7:UJ:789:GLY:H	1.52	0.56
9:UL:862:ASN:OD1	9:UL:905:ASN:ND2	2.36	0.56
10:UM:300:ILE:HG22	10:UM:309:ILE:HD12	1.86	0.56
13:UQ:401:ASN:HB2	13:UQ:414:HIS:HB3	1.86	0.56
13:UQ:770:THR:HG22	13:UQ:796:PRO:HB3	1.86	0.56
22:CG:415:ASN:ND2	22:CG:417:ASP:OD2	2.39	0.56
28:CM:300:SER:HB3	28:CM:310:TRP:HE1	1.70	0.56
32:CS:587:GLN:HG3	32:CS:636:VAL:HB	1.86	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:Ce:33:LEU:HD11	38:Ce:87:LEU:HD11	1.87	0.56
45:Cm:59:GLY:N	50:C1:1449:U:O4	2.37	0.56
53:UT:901:LYS:HD3	53:UT:937:LEU:HD13	1.86	0.56
53:UT:1048:VAL:HG23	53:UT:1049:VAL:HG23	1.87	0.56
53:UT:1743:LEU:HD21	53:UT:1793:THR:HG21	1.86	0.56
15:UU:210:ILE:HD12	15:UU:220:TYR:HB3	1.87	0.56
32:CS:283:LEU:HD11	32:CS:474:LEU:HG	1.86	0.56
32:CS:511:PRO:O	32:CS:649:TYR:OH	2.22	0.56
51:C2:92:A:H4'	51:C2:93:G:H5''	1.88	0.56
53:UT:1032:MET:HG3	53:UT:1083:LEU:HD21	1.86	0.56
56:US:289:MET:HE3	56:US:294:ALA:HB2	1.87	0.56
60:CZ:331:LEU:HD21	60:CZ:366:LEU:HD21	1.87	0.56
4:UD:695:GLN:HB3	4:UD:698:ARG:HB3	1.86	0.56
7:UJ:1667:GLN:HG3	7:UJ:1672:PHE:HB2	1.88	0.56
10:UM:370:SER:OG	10:UM:399:ARG:NH1	2.37	0.56
12:UO:417:ARG:NH2	50:C1:129:G:O6	2.39	0.56
18:CB:76:HIS:HB3	18:CB:81:VAL:HG23	1.88	0.56
20:CD:240:ALA:O	20:CD:244:SER:HB2	2.06	0.56
22:CG:568:ARG:HE	22:CG:575:GLY:HA2	1.71	0.56
23:CH:151:ASP:OD1	23:CH:154:ARG:NH2	2.39	0.56
30:CP:35:GLU:OE1	42:CI:127:ARG:NH1	2.38	0.56
32:CR:26:PHE:O	32:CR:199:CYS:HA	2.06	0.56
32:CR:785:ARG:HH12	32:CS:840:ARG:HH22	1.54	0.56
32:CS:399:VAL:HG11	32:CS:428:LEU:HD11	1.87	0.56
4:UD:774:VAL:HG11	13:UQ:342:ARG:HH21	1.70	0.56
9:UL:12:LYS:HB2	9:UL:722:VAL:HB	1.88	0.56
13:UQ:241:PRO:HA	13:UQ:257:ALA:HA	1.87	0.56
15:UU:559:GLY:HA2	15:UU:564:SER:O	2.06	0.56
20:CD:38:LYS:HG2	20:CD:41:LYS:HZ3	1.69	0.56
28:CM:304:ASP:O	28:CM:306:THR:N	2.38	0.56
29:CN:38:ILE:HG21	29:CN:171:LEU:HD21	1.87	0.56
53:UT:538:LEU:O	53:UT:587:ARG:NH1	2.39	0.56
53:UT:1698:ILE:HD11	53:UT:1735:VAL:HG12	1.88	0.56
2:UB:534:ILE:HD12	2:UB:552:LEU:HD13	1.85	0.56
4:UD:39:ASN:OD1	4:UD:97:HIS:NE2	2.33	0.56
9:UL:474:LEU:HD12	9:UL:479:VAL:HB	1.87	0.56
12:UO:339:GLN:NE2	57:CI:5:SER:HG	2.02	0.56
23:CH:73:THR:HG23	23:CH:74:THR:HG23	1.87	0.56
28:CM:189:GLN:OE1	28:CM:230:ASN:ND2	2.39	0.56
39:Cf:16:ALA:HB2	50:C1:938:C:H5''	1.88	0.56
39:Cf:26:ALA:O	39:Cf:49:ARG:NH2	2.37	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:UR:362:LYS:HD3	50:C1:74:C:H1'	1.88	0.56
24:CI:837:LEU:HD13	24:CI:884:PHE:HB3	1.88	0.56
35:Cb:58:TYR:HE1	35:Cb:62:LYS:HE3	1.70	0.56
44:Ck:60:ASP:HB3	44:Ck:87:ARG:HH12	1.70	0.56
47:Co:351:ARG:HD2	47:Co:405:LEU:HD22	1.88	0.56
50:C1:1259:C:OP1	53:UT:2100:ARG:NH1	2.38	0.56
53:UT:253:GLN:HA	53:UT:256:MET:HE2	1.86	0.56
53:UT:1919:ILE:HD12	53:UT:1992:VAL:HG21	1.88	0.56
5:UF:285:VAL:HG11	11:UN:369:LEU:HB2	1.87	0.56
9:UL:119:ASP:OD1	9:UL:120:LYS:N	2.39	0.56
14:UR:405:THR:HG23	14:UR:407:GLN:HG2	1.87	0.56
15:UU:391:LEU:HD21	15:UU:773:VAL:HG11	1.86	0.56
23:CH:33:ILE:HD12	23:CH:75:ILE:HD11	1.88	0.56
43:Cj:94:ALA:HB2	43:Cj:102:LYS:HG3	1.88	0.56
53:UT:1245:SER:HA	53:UT:1248:ASN:HB2	1.88	0.56
7:UJ:319:ARG:NH2	7:UJ:323:GLN:O	2.31	0.56
7:UJ:1228:LEU:HD23	7:UJ:1271:LEU:HD12	1.87	0.56
7:UJ:1716:GLN:NE2	7:UJ:1717:GLU:OE1	2.39	0.56
12:UO:284:GLN:OE1	12:UO:286:ARG:NH1	2.39	0.56
15:UU:78:ARG:O	15:UU:81:ASN:ND2	2.37	0.56
20:CD:3:LEU:HB3	20:CD:18:ALA:HB3	1.87	0.56
24:CI:286:VAL:O	24:CI:293:ASP:CA	2.27	0.56
30:CP:198:ILE:HG22	49:CU:161:LEU:HD11	1.87	0.56
42:CI:44:THR:HG22	42:CI:51:THR:HA	1.88	0.56
50:C1:849:A:H61	50:C1:873:U:H3	1.53	0.56
51:C2:134:C:H4'	51:C2:181:A:H61	1.71	0.56
53:UT:1027:LEU:HD12	53:UT:1032:MET:HE2	1.88	0.56
59:CY:293:LYS:HG2	59:CY:297:MET:HE3	1.88	0.56
10:UM:303:THR:O	10:UM:306:HIS:ND1	2.37	0.55
17:UZ:154:LEU:HD23	17:UZ:180:ILE:HB	1.86	0.55
53:UT:870:PHE:HA	53:UT:873:THR:HG22	1.88	0.55
57:CI:12:ASN:HA	57:CI:25:LYS:HB2	1.88	0.55
58:CX:213:LYS:O	58:CX:245:ASN:ND2	2.39	0.55
1:UA:121:VAL:HG23	1:UA:144:HIS:HB3	1.88	0.55
4:UD:644:ASP:HA	4:UD:662:LEU:HD12	1.88	0.55
7:UJ:1014:LEU:HD23	7:UJ:1019:PRO:HA	1.88	0.55
7:UJ:1482:HIS:HB3	7:UJ:1522:LEU:HD22	1.88	0.55
10:UM:394:ASN:HA	10:UM:435:ILE:HG23	1.89	0.55
24:CI:221:ASN:ND2	50:C1:1024:U:O4'	2.39	0.55
28:CM:171:SER:HB3	28:CM:203:VAL:HB	1.88	0.55
30:CP:110:GLN:NE2	49:CU:179:SER:O	2.35	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:CR:112:THR:HA	32:CR:115:ILE:HG12	1.89	0.55
54:UH:642:VAL:HG11	54:UH:725:SER:HB3	1.88	0.55
2:UB:584:LEU:HB3	2:UB:625:LYS:HD3	1.88	0.55
10:UM:222:ALA:HB2	10:UM:230:ALA:HA	1.87	0.55
27:CL:658:MET:HB2	27:CL:676:MET:HE1	1.89	0.55
32:CR:397:PRO:HA	32:CR:400:LYS:HG2	1.87	0.55
32:CR:748:ARG:NH2	32:CR:750:THR:OG1	2.40	0.55
53:UT:1313:LEU:HD13	53:UT:1358:LEU:HD11	1.88	0.55
53:UT:1730:GLU:HG3	53:UT:1731:LYS:HD3	1.88	0.55
59:CY:98:LYS:HB3	60:CZ:441:LEU:HD22	1.89	0.55
6:UG:578:ILE:HA	6:UG:582:ARG:HH21	1.70	0.55
10:UM:45:LEU:HD11	10:UM:76:LEU:HD22	1.88	0.55
24:CI:1116:ARG:HE	50:C1:1078:U:H1'	1.71	0.55
53:UT:754:LYS:HA	53:UT:854:LEU:HD11	1.87	0.55
54:UH:88:ARG:HE	54:UH:97:VAL:HG11	1.71	0.55
1:UA:519:ARG:NH1	1:UA:524:GLN:OE1	2.39	0.55
24:CI:760:LEU:HD23	24:CI:763:HIS:HB3	1.88	0.55
29:CO:144:LEU:HD13	29:CO:150:ILE:HG12	1.89	0.55
32:CR:165:MET:O	32:CR:169:VAL:HA	2.07	0.55
53:UT:1090:TYR:O	53:UT:1094:LEU:HB2	2.06	0.55
53:UT:2182:LEU:O	53:UT:2185:LYS:O	2.25	0.55
54:UH:836:ILE:HD11	55:UI:239:LEU:HD11	1.89	0.55
7:UJ:257:GLU:HA	7:UJ:260:VAL:HG12	1.88	0.55
13:UQ:762:LEU:CD2	54:UH:440:ARG:NH1	2.69	0.55
17:UZ:184:LEU:HD23	17:UZ:220:ILE:HD12	1.89	0.55
22:CG:578:VAL:HB	22:CG:604:PHE:HB2	1.89	0.55
29:CN:227:ILE:HD12	29:CN:240:LYS:HG3	1.89	0.55
32:CS:311:PHE:HB2	32:CS:386:VAL:HG22	1.89	0.55
37:Cd:79:GLU:HG2	37:Cd:86:PRO:HG3	1.87	0.55
39:Cf:83:TYR:OH	44:Ck:11:ARG:NH1	2.29	0.55
50:C1:809:U:O4	53:UT:1622:ARG:NH1	2.40	0.55
53:UT:8:ARG:NH1	53:UT:795:PRO:O	2.37	0.55
53:UT:585:TYR:OH	53:UT:596:ASP:OD1	2.25	0.55
1:UA:445:ILE:HA	1:UA:470:PRO:HB3	1.89	0.55
4:UD:349:PRO:HG2	4:UD:365:LEU:HB2	1.88	0.55
7:UJ:784:PRO:HA	7:UJ:816:MET:HE2	1.88	0.55
15:UU:177:ALA:HB2	15:UU:183:ASN:HB3	1.89	0.55
25:CJ:119:ARG:NH1	50:C1:354:G:H5''	2.22	0.55
28:CM:67:GLN:OE1	45:Cm:68:ARG:NH2	2.40	0.55
32:CR:234:LYS:HA	32:CR:237:LYS:HE3	1.89	0.55
35:Cb:177:THR:HG23	35:Cb:196:THR:HA	1.88	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:UT:1471:ALA:O	53:UT:1475:GLN:N	2.31	0.55
6:UG:264:LEU:HD11	6:UG:273:LEU:HD22	1.88	0.55
9:UL:491:LEU:HD12	9:UL:501:GLU:HB2	1.88	0.55
9:UL:917:MET:HG2	10:UM:827:GLN:HG2	1.88	0.55
10:UM:624:ILE:HB	10:UM:638:PHE:HB2	1.89	0.55
14:UR:253:ARG:HH21	14:UR:256:LEU:HD11	1.70	0.55
25:CJ:117:ARG:HG3	50:C1:353:G:H4'	1.89	0.55
39:Cf:101:VAL:HA	39:Cf:171:ALA:O	2.07	0.55
53:UT:70:TRP:NE1	53:UT:124:ASP:OD2	2.40	0.55
4:UD:555:SER:HG	4:UD:559:ARG:H	1.54	0.55
5:UF:285:VAL:HB	11:UN:369:LEU:HD12	1.89	0.55
7:UJ:1555:THR:HA	7:UJ:1558:HIS:CD2	2.42	0.55
12:UO:70:ASN:HD22	12:UO:70:ASN:C	2.13	0.55
12:UO:218:ASP:OD1	12:UO:220:ARG:NH1	2.39	0.55
15:UU:205:ASP:O	15:UU:207:TRP:N	2.40	0.55
15:UU:226:SER:HG	15:UU:229:CYS:HG	1.53	0.55
32:CS:724:GLY:HA2	32:CS:762:MET:O	2.07	0.55
4:UD:450:ASP:OD1	4:UD:477:THR:OG1	2.22	0.55
14:UR:263:ILE:HG12	14:UR:616:ILE:HG12	1.88	0.55
20:CD:288:ASN:HB3	20:CD:372:SER:HB3	1.89	0.55
32:CS:30:VAL:HG22	32:CS:153:LEU:HB2	1.88	0.55
32:CS:524:ASP:O	32:CS:528:SER:HB3	2.06	0.55
39:Cf:89:GLU:HG3	52:CW:138:PHE:HD2	1.71	0.55
40:Cg:57:LEU:HD22	59:CY:314:LEU:HD21	1.89	0.55
50:C1:307:U:H3	50:C1:333:C:H42	1.55	0.55
54:UH:823:LEU:HD11	55:UI:257:LEU:HD23	1.88	0.55
12:UO:273:GLN:NE2	56:US:335:ASP:OD2	2.38	0.54
55:UE:154:GLY:N	56:US:305:ASP:OD2	2.35	0.54
55:UE:201:ALA:HB1	55:UE:245:VAL:HG21	1.88	0.54
56:US:476:LYS:O	56:US:479:SER:N	2.40	0.54
7:UJ:32:SER:HB2	7:UJ:123:ARG:HH11	1.72	0.54
7:UJ:667:SER:HA	7:UJ:673:HIS:HB3	1.89	0.54
7:UJ:715:VAL:HA	7:UJ:748:LEU:HD13	1.87	0.54
7:UJ:1090:PRO:O	7:UJ:1094:LYS:N	2.39	0.54
7:UJ:1650:VAL:HA	7:UJ:1653:THR:HG22	1.87	0.54
32:CR:236:LEU:HG	32:CR:240:LYS:HE3	1.88	0.54
2:UB:487:GLU:HA	2:UB:490:ASN:HD22	1.72	0.54
15:UU:347:ALA:O	15:UU:349:GLN:NE2	2.39	0.54
15:UU:511:VAL:HB	15:UU:524:TRP:HB2	1.87	0.54
15:UU:691:VAL:HB	15:UU:701:ARG:HB2	1.89	0.54
15:UU:992:GLN:NE2	15:UU:1023:GLN:OE1	2.27	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:Cf:5:ARG:NH2	50:C1:918:U:O4	2.41	0.54
42:Ci:65:ARG:HB3	50:C1:1490:A:H5'	1.90	0.54
52:CW:344:MET:HE2	52:CW:346:LEU:HD11	1.89	0.54
53:UT:348:VAL:HG12	53:UT:804:LEU:HB2	1.89	0.54
53:UT:532:SER:HB3	53:UT:576:PHE:HE1	1.72	0.54
53:UT:1694:LEU:HD12	53:UT:1712:VAL:HB	1.89	0.54
4:UD:437:SER:OG	4:UD:438:GLU:N	2.41	0.54
9:UL:449:LEU:HB3	9:UL:463:PHE:HB2	1.87	0.54
24:CI:68:PRO:HB3	24:CI:113:ARG:HG3	1.89	0.54
28:CM:172:SER:OG	28:CM:176:CYS:SG	2.65	0.54
28:CM:284:ALA:HB3	28:CM:304:ASP:H	1.72	0.54
32:CS:111:GLU:HB2	32:CS:114:LYS:HB2	1.89	0.54
50:C1:1665:A:N3	50:C1:1666:C:N4	2.54	0.54
58:CX:238:ARG:HH21	58:CX:241:LEU:HD23	1.73	0.54
2:UB:574:ARG:HG2	2:UB:593:ILE:HG21	1.89	0.54
7:UJ:1647:TRP:HZ3	7:UJ:1698:VAL:HB	1.72	0.54
10:UM:382:ILE:HB	10:UM:388:MET:HB2	1.89	0.54
20:CD:201:LEU:HD21	20:CD:229:LEU:HD11	1.90	0.54
22:CG:185:THR:OG1	22:CG:193:THR:OG1	2.24	0.54
24:CI:63:PRO:HG2	24:CI:66:PRO:HA	1.89	0.54
32:CS:578:ARG:HG2	32:CS:579:LEU:H	1.72	0.54
35:Cb:143:ASP:OD2	35:Cb:145:ARG:NH2	2.41	0.54
53:UT:290:LEU:HD11	53:UT:334:GLN:HG2	1.90	0.54
53:UT:1496:ASP:O	53:UT:1502:ARG:NE	2.39	0.54
10:UM:60:ASP:OD2	10:UM:86:ARG:NH2	2.40	0.54
12:UO:149:VAL:HB	12:UO:163:CYS:HB2	1.88	0.54
16:UX:54:PRO:HB3	16:UX:85:ALA:HB1	1.88	0.54
20:CD:10:SER:OG	20:CD:142:ASN:OD1	2.19	0.54
20:CD:20:ASP:OD2	20:CD:32:ARG:NH2	2.41	0.54
32:CS:276:THR:O	32:CS:279:ASN:ND2	2.39	0.54
44:Ck:83:THR:HG22	44:Ck:124:GLU:HG3	1.89	0.54
56:US:253:HIS:CD2	56:US:254:PRO:HD2	2.43	0.54
57:Cl:64:GLU:OE1	57:Cl:68:ARG:NH2	2.38	0.54
2:UB:14:ARG:NH1	50:C1:1733:G:OP1	2.40	0.54
7:UJ:1713:VAL:HG22	7:UJ:1715:SER:HB3	1.90	0.54
10:UM:540:ARG:HH22	10:UM:576:LEU:HB3	1.72	0.54
12:UO:492:PRO:HA	12:UO:495:ARG:HB2	1.90	0.54
32:CR:374:PRO:HB2	32:CR:398:LEU:HD13	1.90	0.54
32:CR:570:LEU:HD22	32:CR:653:ALA:HB2	1.90	0.54
34:Ca:136:ARG:NH2	50:C1:1469:A:OP1	2.40	0.54
53:UT:372:GLY:HA3	53:UT:419:LYS:HE2	1.89	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:UT:1154:VAL:HA	53:UT:1157:ARG:HG2	1.88	0.54
56:US:484:LYS:NZ	56:US:486:ALA:O	2.32	0.54
4:UD:182:THR:O	21:CE:124:ARG:NH2	2.41	0.54
7:UJ:229:ILE:HD11	7:UJ:278:LEU:HD23	1.89	0.54
7:UJ:1754:GLU:HG2	7:UJ:1758:HIS:CE1	2.43	0.54
12:UO:83:ILE:HB	12:UO:93:LYS:HB3	1.89	0.54
23:CH:102:ILE:HD12	23:CH:137:VAL:HG22	1.89	0.54
28:CM:251:GLU:OE1	28:CM:254:ASN:ND2	2.40	0.54
53:UT:1184:TRP:HB3	53:UT:1226:PHE:HE2	1.73	0.54
53:UT:2166:TYR:O	53:UT:2168:ARG:NH1	2.41	0.54
11:UN:907:PRO:O	28:CM:25:ARG:NH2	2.40	0.54
15:UU:690:ARG:HG3	15:UU:702:GLU:HG2	1.89	0.54
26:CK:149:PRO:HD2	26:CK:170:VAL:HG11	1.90	0.54
32:CS:570:LEU:HB3	32:CS:584:CYS:HB3	1.89	0.54
38:Ce:99:LEU:HD21	38:Ce:139:LEU:HD22	1.90	0.54
45:Cm:19:LYS:NZ	50:C1:1666:C:O2'	2.41	0.54
52:CW:97:SER:O	52:CW:116:GLN:NE2	2.41	0.54
53:UT:1606:ALA:HA	53:UT:1609:LEU:HD12	1.89	0.54
32:CS:143:VAL:HG21	32:CS:149:VAL:HG22	1.90	0.54
32:CS:509:GLY:HA2	60:CZ:571:ARG:HD2	1.90	0.54
47:Co:386:VAL:HG22	47:Co:406:ILE:HG12	1.90	0.54
48:Cp:13:VAL:O	48:Cp:52:ASN:N	2.41	0.54
53:UT:1876:LEU:HD23	53:UT:1889:ILE:HD11	1.89	0.54
54:UH:754:ARG:HA	55:UI:210:ARG:HB2	1.89	0.54
1:UA:364:ILE:HD13	1:UA:399:THR:HG21	1.91	0.53
4:UD:549:VAL:HA	4:UD:565:ASP:HA	1.89	0.53
7:UJ:1699:ILE:HA	7:UJ:1702:VAL:HG12	1.89	0.53
8:UK:1:MET:HB2	8:UK:4:LEU:HB2	1.90	0.53
28:CM:216:VAL:HG21	28:CM:242:CYS:HB2	1.90	0.53
32:CS:752:ASN:ND2	32:CS:757:GLU:O	2.39	0.53
39:Cf:36:THR:O	39:Cf:96:LEU:N	2.39	0.53
45:Cm:11:LEU:HD22	45:Cm:74:VAL:HG13	1.90	0.53
50:C1:313:A:N6	50:C1:327:G:O2'	2.41	0.53
53:UT:742:LEU:HB2	53:UT:745:VAL:HG12	1.90	0.53
2:UB:618:ILE:HG23	2:UB:639:LEU:HB3	1.89	0.53
7:UJ:170:TYR:O	7:UJ:174:LEU:HA	2.07	0.53
7:UJ:1478:TYR:HA	7:UJ:1481:LEU:HG	1.90	0.53
20:CD:374:ARG:HE	21:CE:67:HIS:CD2	2.25	0.53
33:CT:84:PRO:O	33:CT:134:TYR:OH	2.25	0.53
35:Cb:155:LYS:NZ	50:C1:828:G:OP1	2.41	0.53
35:Cb:183:ILE:HG12	35:Cb:225:VAL:HG22	1.90	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:Cf:48:THR:HG21	39:Cf:54:LYS:HE3	1.90	0.53
44:Ck:86:HIS:CE1	44:Ck:87:ARG:HD2	2.43	0.53
50:C1:808:A:H61	50:C1:821:C:H2'	1.74	0.53
59:CY:57:PHE:HE2	60:CZ:404:TRP:HE3	1.57	0.53
1:UA:558:ARG:HB2	1:UA:566:ALA:HB2	1.89	0.53
7:UJ:1401:LEU:HD22	7:UJ:1418:ALA:HB1	1.89	0.53
10:UM:778:VAL:HG21	10:UM:825:VAL:HG22	1.90	0.53
13:UQ:581:ARG:HE	13:UQ:583:ILE:HD11	1.74	0.53
14:UR:164:ASP:OD1	14:UR:165:LEU:N	2.41	0.53
32:CR:618:VAL:HG11	32:CR:627:PHE:CD2	2.43	0.53
32:CS:59:ALA:HB3	32:CS:125:LEU:HA	1.90	0.53
32:CS:345:ILE:HG22	32:CS:358:ARG:HB3	1.90	0.53
2:UB:782:SER:HB3	2:UB:786:ARG:HH12	1.72	0.53
3:UC:642:LEU:HD21	50:C1:1082:G:H5''	1.89	0.53
9:UL:92:ILE:HB	9:UL:106:PHE:HB2	1.90	0.53
9:UL:654:GLN:HB2	9:UL:672:ALA:HB3	1.91	0.53
11:UN:279:SER:HB2	53:UT:2200:ILE:HD11	1.90	0.53
17:UZ:116:PHE:HB3	17:UZ:120:LEU:HB2	1.89	0.53
22:CG:173:VAL:O	22:CG:561:ASN:ND2	2.42	0.53
27:CL:514:ASN:HB3	27:CL:517:LEU:HD12	1.88	0.53
32:CS:112:THR:O	32:CS:138:ARG:NH1	2.41	0.53
54:UH:827:MET:HE3	54:UH:831:ARG:HH12	1.73	0.53
2:UB:599:THR:HG21	56:US:523:ILE:HD13	1.90	0.53
3:UC:595:LYS:HA	3:UC:598:ARG:HG2	1.90	0.53
7:UJ:116:LYS:HE2	33:CT:69:LEU:HD12	1.91	0.53
7:UJ:1479:THR:HA	7:UJ:1522:LEU:HD11	1.91	0.53
9:UL:485:LYS:HA	9:UL:510:ALA:HA	1.91	0.53
15:UU:562:GLY:O	15:UU:620:ARG:NH2	2.37	0.53
16:UX:80:MET:HE2	16:UX:86:SER:HA	1.88	0.53
50:C1:697:U:H2'	50:C1:698:A:H8	1.73	0.53
53:UT:341:VAL:HG12	53:UT:345:MET:HE2	1.90	0.53
53:UT:1322:PRO:HA	53:UT:1325:LYS:HB2	1.90	0.53
53:UT:1617:ARG:HD3	53:UT:1689:ASN:HD21	1.74	0.53
53:UT:1943:VAL:HG12	53:UT:2005:LYS:HE3	1.89	0.53
7:UJ:1706:VAL:HA	7:UJ:1709:LEU:HG	1.89	0.53
10:UM:774:PHE:HA	10:UM:777:VAL:HG12	1.91	0.53
13:UQ:527:THR:HG23	13:UQ:529:GLU:H	1.73	0.53
14:UR:176:ARG:HG3	15:UU:241:LEU:HD13	1.89	0.53
29:CO:69:ASN:ND2	29:CO:72:GLU:OE1	2.42	0.53
13:UQ:156:LEU:HD23	13:UQ:168:ILE:HD11	1.91	0.53
13:UQ:616:ASP:OD2	13:UQ:617:LEU:N	2.42	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:UX:107:ARG:O	16:UX:111:MET:HG3	2.09	0.53
19:CC:195:ALA:HB1	19:CC:216:ASN:HB3	1.91	0.53
35:Cb:100:ARG:NH2	35:Cb:121:TYR:O	2.42	0.53
50:C1:860:C:O2'	50:C1:862:U:OP2	2.26	0.53
53:UT:1638:VAL:HA	53:UT:1641:LEU:HD12	1.91	0.53
53:UT:1645:VAL:HG13	53:UT:1648:LEU:HD12	1.89	0.53
53:UT:1710:VAL:HG12	53:UT:1739:ILE:HG23	1.90	0.53
53:UT:1849:LYS:N	53:UT:1851:GLN:OE1	2.42	0.53
9:UL:701:ALA:HB3	9:UL:714:ALA:HB3	1.89	0.53
18:CB:230:VAL:HG22	18:CB:232:GLN:HG2	1.91	0.53
28:CM:47:VAL:HB	28:CM:379:LEU:HD21	1.91	0.53
29:CO:130:ILE:HD12	29:CO:131:PRO:HD2	1.90	0.53
32:CR:249:ILE:HA	32:CR:252:LEU:HD12	1.90	0.53
32:CR:282:THR:HG23	32:CR:469:LEU:HD11	1.90	0.53
36:Cc:57:ILE:HD11	43:Cj:47:LYS:HG2	1.90	0.53
55:UE:153:LEU:HD11	56:US:302:MET:HG2	1.89	0.53
58:CX:374:ARG:NH2	58:CX:419:GLN:OE1	2.42	0.53
1:UA:544:GLN:OE1	43:Cj:114:ARG:NE	2.42	0.53
5:UF:92:THR:HA	5:UF:95:ILE:HD12	1.90	0.53
5:UF:285:VAL:HA	5:UF:288:LYS:HG2	1.91	0.53
10:UM:815:ASP:O	10:UM:818:THR:OG1	2.26	0.53
17:UZ:215:ARG:HB3	17:UZ:220:ILE:HD11	1.91	0.53
18:CA:238:ILE:O	18:CA:242:ASN:ND2	2.33	0.53
29:CO:175:CYS:HA	29:CO:201:SER:O	2.09	0.53
32:CS:312:ILE:HG12	32:CS:387:VAL:HB	1.89	0.53
41:Ch:104:ARG:NH2	50:C1:1535:C:O2'	2.42	0.53
47:Co:369:ASP:O	47:Co:383:LYS:NZ	2.41	0.53
53:UT:467:CYS:HA	53:UT:537:VAL:HG21	1.91	0.53
54:UH:743:ARG:HH22	54:UH:818:GLU:HG3	1.74	0.53
58:CX:278:ILE:HD13	58:CX:320:GLU:HG3	1.90	0.53
7:UJ:236:ARG:HD2	7:UJ:239:ILE:HD12	1.91	0.53
12:UO:23:GLU:OE2	12:UO:27:TRP:NE1	2.42	0.53
16:UX:114:ARG:NH2	28:CM:349:ASN:OD1	2.40	0.53
20:CD:190:TYR:HD1	20:CD:257:ILE:HG21	1.73	0.53
21:CF:33:GLN:HG2	21:CF:106:ASN:HB3	1.90	0.53
24:CI:620:ARG:HA	24:CI:624:PHE:HB2	1.91	0.53
37:Cd:74:ARG:NH2	50:C1:1004:A2M:OP2	2.41	0.53
54:UH:4:LYS:HZ3	54:UH:601:GLU:HA	1.74	0.53
58:CX:371:LEU:HD21	58:CX:417:PHE:HB2	1.89	0.53
7:UJ:1487:SER:HA	7:UJ:1490:LYS:HE2	1.91	0.52
7:UJ:1499:TYR:HA	7:UJ:1502:ILE:HG22	1.90	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:UL:589:VAL:HB	9:UL:603:LEU:HB2	1.90	0.52
9:UL:816:PRO:HA	9:UL:819:VAL:HG22	1.91	0.52
12:UO:206:VAL:HG21	12:UO:247:LEU:HD11	1.91	0.52
35:Cb:171:ASP:OD1	35:Cb:172:PHE:N	2.39	0.52
53:UT:148:ILE:HG21	53:UT:168:LEU:HD13	1.91	0.52
53:UT:326:VAL:HG12	53:UT:330:MET:HE1	1.92	0.52
53:UT:1909:GLN:OE1	53:UT:1985:ASN:ND2	2.40	0.52
60:CZ:279:ASP:OD1	60:CZ:282:ARG:NH2	2.42	0.52
1:UA:577:THR:HG21	1:UA:677:GLY:HA2	1.92	0.52
4:UD:377:ALA:HB3	4:UD:382:TYR:HB2	1.90	0.52
4:UD:500:SER:O	4:UD:528:ARG:NH1	2.42	0.52
9:UL:511:VAL:HA	9:UL:527:GLY:HA3	1.90	0.52
15:UU:835:GLN:NE2	15:UU:985:ARG:O	2.43	0.52
21:CE:35:LYS:HB2	21:CE:102:SER:HB3	1.90	0.52
22:CG:313:LYS:NZ	22:CG:322:TYR:OH	2.39	0.52
37:Cd:85:ARG:HH12	50:C1:745:U:H5"	1.73	0.52
50:C1:1016:G:H5"	50:C1:1017:C:H5"	1.90	0.52
7:UJ:556:LEU:HD21	7:UJ:592:ILE:HG23	1.90	0.52
7:UJ:1429:ILE:O	7:UJ:1431:TYR:N	2.41	0.52
12:UO:14:PRO:HA	55:UE:35:VAL:HG13	1.90	0.52
18:CB:234:ASP:OD2	18:CB:237:ARG:NH2	2.43	0.52
22:CG:151:ARG:HH22	22:CG:494:GLU:HB3	1.74	0.52
24:CI:86:LYS:HG3	24:CI:100:PRO:HG3	1.90	0.52
32:CR:196:CYS:HB2	32:CR:489:TRP:CD1	2.45	0.52
32:CR:633:ALA:O	32:CR:723:VAL:HA	2.09	0.52
32:CR:840:ARG:NH2	32:CR:853:VAL:O	2.42	0.52
32:CS:311:PHE:O	32:CS:386:VAL:HA	2.09	0.52
53:UT:737:MET:HE3	53:UT:740:VAL:HG21	1.91	0.52
53:UT:1578:PRO:HA	53:UT:1581:GLU:HG2	1.91	0.52
53:UT:1783:LYS:O	53:UT:1787:LEU:N	2.41	0.52
1:UA:347:VAL:HG11	1:UA:389:GLU:HA	1.90	0.52
6:UG:457:GLU:HB2	11:UN:878:LYS:HB3	1.91	0.52
7:UJ:256:SER:HB2	14:UR:230:LEU:HD23	1.89	0.52
7:UJ:974:LYS:HD2	7:UJ:1017:THR:HG21	1.90	0.52
7:UJ:1600:LEU:HA	7:UJ:1603:VAL:HG22	1.92	0.52
9:UL:113:ILE:HD13	9:UL:129:SER:HB3	1.90	0.52
10:UM:271:MET:HG2	10:UM:273:ARG:HH12	1.75	0.52
14:UR:453:GLY:HA3	14:UR:526:ILE:HG13	1.90	0.52
16:UX:62:THR:HG23	16:UX:99:LEU:HG	1.91	0.52
53:UT:130:ALA:O	53:UT:133:LEU:O	2.28	0.52
53:UT:287:LYS:HD3	53:UT:290:LEU:HD12	1.90	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:UT:2176:MET:HE1	53:UT:2214:CYS:HA	1.91	0.52
53:UT:2199:PHE:HE2	53:UT:2241:LEU:HG	1.73	0.52
54:UH:777:ALA:HA	54:UH:780:MET:HE2	1.92	0.52
4:UD:884:ARG:NH2	50:C1:71:A:O2'	2.35	0.52
7:UJ:752:TRP:NE1	7:UJ:775:ASP:OD1	2.39	0.52
9:UL:590:LYS:NZ	9:UL:602:ASN:OD1	2.43	0.52
10:UM:786:ASP:OD1	10:UM:786:ASP:N	2.42	0.52
24:CI:56:VAL:HG22	46:Cn:52:ILE:HG12	1.92	0.52
29:CN:19:LEU:HB3	56:US:482:PHE:HB2	1.92	0.52
32:CR:826:LYS:HE3	32:CR:927:VAL:HA	1.92	0.52
38:Ce:76:PHE:O	38:Ce:79:VAL:C	2.52	0.52
39:Cf:41:LYS:NZ	50:C1:844:U:O5'	2.38	0.52
44:Ck:38:ARG:NH1	44:Ck:53:ALA:O	2.42	0.52
53:UT:1310:THR:O	53:UT:1314:ASN:ND2	2.43	0.52
1:UA:21:LEU:HB2	1:UA:30:PHE:HB2	1.91	0.52
7:UJ:608:ARG:NH1	7:UJ:668:VAL:O	2.42	0.52
7:UJ:1615:LYS:HE2	7:UJ:1660:HIS:HB2	1.92	0.52
11:UN:329:THR:HG21	11:UN:933:MET:HE1	1.92	0.52
13:UQ:765:TYR:OH	13:UQ:819:GLU:O	2.28	0.52
24:CI:56:VAL:O	50:C1:1018:G:N1	2.38	0.52
26:CK:108:ARG:HH21	26:CK:109:LEU:HD23	1.74	0.52
29:CO:39:VAL:HG11	29:CO:99:LEU:HD11	1.91	0.52
32:CR:389:ASP:HA	32:CR:411:ALA:HB3	1.92	0.52
43:Cj:126:PRO:HB3	50:C1:2166:A:H5''	1.92	0.52
58:CX:390:LEU:HD13	58:CX:432:ALA:HB1	1.91	0.52
58:CX:427:GLU:HA	58:CX:430:ARG:HE	1.73	0.52
2:UB:700:ARG:HH21	2:UB:702:LEU:HA	1.74	0.52
7:UJ:1754:GLU:O	7:UJ:1758:HIS:ND1	2.41	0.52
10:UM:249:SER:OG	10:UM:257:THR:OG1	2.27	0.52
20:CD:361:ILE:HG13	20:CD:405:LEU:HD13	1.91	0.52
20:CD:378:PHE:HB2	21:CE:63:SER:HB3	1.91	0.52
21:CE:63:SER:HA	21:CE:66:LEU:HB2	1.90	0.52
29:CN:246:GLU:HG3	29:CN:251:ILE:HB	1.92	0.52
42:Ci:134:THR:O	50:C1:1471:U:O2'	2.27	0.52
53:UT:1470:TRP:O	53:UT:1475:GLN:NE2	2.40	0.52
55:UI:178:LEU:HD13	55:UI:216:ARG:HH12	1.75	0.52
3:UC:458:THR:HB	56:US:473:THR:OG1	2.10	0.52
6:UG:204:ASP:OD2	16:UX:13:ARG:NH2	2.43	0.52
10:UM:741:GLN:HE21	10:UM:764:LEU:HD21	1.75	0.52
32:CS:41:LEU:HD23	32:CS:44:ILE:HD12	1.91	0.52
32:CS:876:LEU:HB3	32:CS:880:GLN:HB2	1.91	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:UT:310:ILE:HG23	53:UT:353:ARG:HG3	1.92	0.52
60:CZ:539:SER:OG	60:CZ:542:ARG:NH2	2.43	0.52
55:UI:158:ASN:HB2	55:UI:162:ARG:NH1	2.24	0.52
1:UA:162:ASP:OD1	1:UA:207:GLN:NE2	2.38	0.52
7:UJ:1291:VAL:O	7:UJ:1339:TYR:OH	2.22	0.52
13:UQ:273:SER:N	13:UQ:276:GLU:OE2	2.39	0.52
15:UU:137:LEU:HD12	15:UU:158:ARG:HD3	1.92	0.52
15:UU:441:ARG:NH1	51:C2:68:A:OP1	2.43	0.52
30:CP:141:GLN:HG3	49:CU:257:ARG:HH21	1.75	0.52
47:Co:345:ARG:NE	53:UT:73:LEU:O	2.39	0.52
50:C1:849:A:N7	50:C1:874:G:N2	2.58	0.52
53:UT:427:ILE:O	53:UT:431:SER:CB	2.58	0.52
53:UT:1581:GLU:HA	53:UT:1584:ILE:HG12	1.91	0.52
53:UT:1752:GLU:HA	53:UT:1755:ARG:HD2	1.92	0.52
55:UI:220:TRP:HA	55:UI:223:VAL:HG22	1.91	0.52
1:UA:732:LYS:O	1:UA:736:MET:HG3	2.10	0.52
5:UF:287:ARG:HA	5:UF:292:TRP:CD2	2.45	0.52
7:UJ:1001:PRO:HA	7:UJ:1004:ILE:HG12	1.92	0.52
7:UJ:1255:LEU:HD12	7:UJ:1258:LEU:HD12	1.92	0.52
7:UJ:1475:ARG:O	7:UJ:1518:ASN:ND2	2.42	0.52
10:UM:192:ILE:HA	10:UM:195:ARG:HG3	1.90	0.52
10:UM:477:GLY:O	10:UM:539:ARG:NH1	2.43	0.52
14:UR:400:ILE:HB	14:UR:410:ALA:HB3	1.91	0.52
17:UZ:180:ILE:HD13	17:UZ:232:LEU:HD12	1.91	0.52
22:CG:262:VAL:HG11	22:CG:303:LEU:HD11	1.92	0.52
23:CH:375:TRP:O	24:CI:763:HIS:NE2	2.43	0.52
24:CI:1076:MET:HA	24:CI:1079:ARG:HG2	1.92	0.52
27:CL:561:ARG:NH2	27:CL:564:MET:SD	2.83	0.52
53:UT:198:LYS:HA	53:UT:247:GLN:HE22	1.74	0.52
53:UT:1348:GLN:HA	53:UT:1351:VAL:HG22	1.92	0.52
53:UT:1746:LYS:O	53:UT:1751:ARG:NH2	2.41	0.52
53:UT:2136:ARG:HH11	53:UT:2181:LEU:HD11	1.74	0.52
54:UH:702:HIS:CD2	54:UH:705:ARG:HH22	2.28	0.52
58:CX:298:LYS:HD3	58:CX:299:PRO:HD2	1.92	0.52
2:UB:686:PRO:HD2	2:UB:689:ILE:HG13	1.92	0.51
4:UD:840:PRO:HA	4:UD:860:VAL:HG23	1.92	0.51
6:UG:202:ILE:HB	6:UG:211:HIS:HB2	1.91	0.51
10:UM:200:TRP:HZ3	10:UM:210:PHE:HB2	1.75	0.51
10:UM:579:GLN:OE1	10:UM:612:ARG:NH2	2.44	0.51
20:CD:220:ALA:O	20:CD:238:LYS:NZ	2.33	0.51
22:CG:123:PHE:HZ	35:Cb:237:LEU:HB3	1.75	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:CI:1053:ASN:ND2	50:C1:2068:C:OP1	2.43	0.51
32:CS:634:ARG:HH21	32:CS:636:VAL:HG22	1.75	0.51
35:Cb:183:ILE:O	35:Cb:190:GLY:CA	2.58	0.51
43:Cj:42:GLU:HA	43:Cj:45:ARG:HB2	1.92	0.51
3:UC:639:LYS:HD2	33:CT:123:LYS:HB3	1.92	0.51
7:UJ:1086:TYR:CZ	7:UJ:1094:LYS:HD3	2.45	0.51
7:UJ:1754:GLU:HG2	7:UJ:1758:HIS:HE1	1.75	0.51
7:UJ:1778:VAL:HA	7:UJ:1781:GLU:HG3	1.92	0.51
32:CR:308:SER:N	32:CR:384:GLU:OE2	2.40	0.51
34:Ca:32:ILE:HG22	34:Ca:96:CYS:HB3	1.91	0.51
35:Cb:86:PHE:HD2	35:Cb:87:MET:HG2	1.75	0.51
41:Ch:108:ASP:O	41:Ch:111:SER:OG	2.27	0.51
52:CW:137:ARG:NH1	52:CW:167:GLU:OE2	2.43	0.51
54:UH:588:THR:HG23	54:UH:609:ILE:HD11	1.92	0.51
1:UA:385:VAL:HA	1:UA:401:SER:HB2	1.92	0.51
10:UM:117:LEU:HG	10:UM:128:THR:HG22	1.93	0.51
13:UQ:762:LEU:HD21	54:UH:440:ARG:HH11	1.75	0.51
22:CG:167:ARG:HE	22:CG:598:ARG:HH12	1.56	0.51
32:CR:313:THR:HG22	32:CR:388:ILE:HG22	1.92	0.51
32:CS:99:ILE:HG23	32:CS:104:ILE:HD13	1.92	0.51
40:Cg:55:ARG:NH1	40:Cg:59:THR:OG1	2.43	0.51
53:UT:693:THR:HA	53:UT:696:MET:HE2	1.91	0.51
54:UH:4:LYS:NZ	54:UH:601:GLU:HA	2.26	0.51
54:UH:494:TRP:CD2	54:UH:498:MET:HE1	2.45	0.51
1:UA:774:LEU:HD22	1:UA:819:VAL:HG21	1.92	0.51
2:UB:559:LEU:HA	2:UB:562:THR:HG22	1.92	0.51
7:UJ:495:LEU:HD21	7:UJ:520:VAL:HG21	1.92	0.51
21:CF:63:SER:HA	21:CF:66:LEU:HB2	1.92	0.51
52:CW:21:ARG:O	53:UT:968:ARG:NH2	2.42	0.51
3:UC:608:TYR:OH	40:Cg:31:GLU:OE2	2.25	0.51
24:CI:354:THR:HG22	32:CR:4:GLN:HG2	1.93	0.51
27:CL:82:LEU:HD13	27:CL:130:VAL:HG21	1.93	0.51
28:CM:308:ARG:NH1	28:CM:317:SER:OG	2.43	0.51
40:Cg:171:ARG:HD3	50:C1:1095:A:H5''	1.92	0.51
44:Ck:51:LYS:HD2	44:Ck:54:ILE:HD12	1.93	0.51
50:C1:925:G:OP1	52:CW:119:ARG:NE	2.40	0.51
52:CW:23:LEU:HD12	52:CW:27:LEU:HD23	1.91	0.51
53:UT:1388:VAL:HA	53:UT:1391:ILE:HD12	1.92	0.51
58:CX:360:VAL:HG12	58:CX:362:ALA:H	1.75	0.51
7:UJ:1766:TYR:HA	7:UJ:1769:GLU:HG3	1.93	0.51
9:UL:353:VAL:HA	9:UL:356:VAL:HG12	1.93	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:UO:121:GLY:HA2	12:UO:147:VAL:HG23	1.92	0.51
15:UU:847:PRO:HD2	15:UU:850:ARG:HH21	1.74	0.51
21:CF:106:ASN:HD21	21:CF:111:LEU:HD23	1.75	0.51
22:CG:583:GLY:HA2	22:CG:599:CYS:HA	1.92	0.51
32:CS:20:GLN:HG2	32:CS:220:LEU:HD11	1.93	0.51
32:CS:883:ILE:HG12	32:CS:897:LEU:HD21	1.93	0.51
34:Ca:40:VAL:HB	34:Ca:73:LEU:HD12	1.93	0.51
50:C1:62:U:C2	54:UH:894:ARG:HG3	2.46	0.51
50:C1:1230:U:H2'	50:C1:1231:A:H8	1.75	0.51
53:UT:585:TYR:O	53:UT:589:CYS:CB	2.59	0.51
53:UT:1037:ASP:O	53:UT:1040:LEU:O	2.28	0.51
53:UT:1516:LEU:O	53:UT:1518:GLN:N	2.43	0.51
53:UT:1982:THR:OG1	53:UT:1985:ASN:OD1	2.29	0.51
54:UH:875:ASN:O	54:UH:903:ARG:NH2	2.44	0.51
56:US:204:ILE:HG21	56:US:227:LEU:HD11	1.92	0.51
59:CY:41:LEU:HD11	60:CZ:318:ARG:HH21	1.74	0.51
4:UD:758:ARG:HG2	4:UD:768:TRP:HE3	1.76	0.51
10:UM:70:THR:HB	10:UM:123:SER:HB2	1.92	0.51
13:UQ:104:ILE:HG12	13:UQ:113:VAL:HG22	1.92	0.51
15:UU:140:PRO:HD2	15:UU:156:LEU:HD23	1.92	0.51
18:CA:239:VAL:HG21	18:CA:255:ILE:HD12	1.91	0.51
22:CG:100:ARG:HG3	40:Cg:68:LEU:HD23	1.92	0.51
28:CM:242:CYS:HA	28:CM:259:SER:HA	1.91	0.51
37:Cd:94:ARG:NH2	52:CW:89:LEU:O	2.43	0.51
37:Cd:159:ARG:NH1	50:C1:665:C:OP1	2.44	0.51
54:UH:543:ARG:HA	54:UH:546:VAL:HG22	1.93	0.51
1:UA:29:LEU:HD21	1:UA:322:LEU:HD11	1.91	0.51
2:UB:489:LEU:HA	2:UB:492:VAL:HG12	1.92	0.51
4:UD:96:ILE:HG12	4:UD:536:HIS:HB2	1.92	0.51
4:UD:108:THR:HG21	61:UP:333:PRO:HG2	1.92	0.51
18:CB:222:MET:HG2	20:CD:124:GLN:HA	1.92	0.51
18:CB:226:ILE:HD12	18:CB:247:LEU:HD22	1.93	0.51
19:CC:248:GLN:HA	19:CC:252:LEU:HB2	1.93	0.51
31:CQ:112:GLN:HB3	31:CQ:125:ARG:HB3	1.91	0.51
31:CQ:212:ALA:HB3	31:CQ:215:LYS:HB2	1.92	0.51
37:Cd:30:LYS:H	37:Cd:102:VAL:HG12	1.76	0.51
54:UH:879:THR:HG23	54:UH:880:GLU:HG3	1.92	0.51
55:UE:25:LYS:NZ	55:UE:27:ARG:O	2.44	0.51
59:CY:110:GLN:HA	59:CY:113:LYS:HE3	1.93	0.51
7:UJ:1213:ASP:OD1	7:UJ:1217:ALA:N	2.39	0.51
7:UJ:1380:ASP:OD1	7:UJ:1427:GLN:NE2	2.43	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:CG:252:VAL:HG12	22:CG:263:THR:HG22	1.93	0.51
22:CG:343:ARG:HG3	22:CG:358:LYS:HA	1.93	0.51
24:CI:612:ASN:HD22	24:CI:612:ASN:C	2.17	0.51
24:CI:1094:MET:HE1	33:CT:108:LEU:HD13	1.93	0.51
28:CM:224:LEU:HB2	28:CM:234:ILE:HG22	1.93	0.51
32:CS:33:HIS:NE2	32:CS:205:GLU:OE2	2.40	0.51
32:CS:357:VAL:HG13	32:CS:370:GLN:HE22	1.75	0.51
38:Ce:55:ILE:HD11	38:Ce:185:ARG:HG2	1.92	0.51
53:UT:1783:LYS:HB3	53:UT:1786:GLN:HG3	1.93	0.51
54:UH:355:LEU:HD22	54:UH:414:ILE:HD11	1.93	0.51
4:UD:14:SER:O	4:UD:48:ARG:NH1	2.44	0.51
4:UD:800:LEU:HD13	7:UJ:664:LEU:HD23	1.93	0.51
6:UG:372:ASN:HB3	6:UG:375:ARG:HG2	1.93	0.51
15:UU:274:ALA:HB1	15:UU:302:THR:HG21	1.92	0.51
37:Cd:78:SER:OG	37:Cd:92:ARG:NH1	2.44	0.51
42:CI:133:PRO:HB3	50:C1:1472:A:H5''	1.91	0.51
53:UT:663:SER:HB3	53:UT:836:ILE:HG21	1.93	0.51
54:UH:754:ARG:HG3	54:UH:755:TYR:H	1.76	0.51
2:UB:689:ILE:O	2:UB:722:GLN:NE2	2.43	0.50
2:UB:701:GLN:HE21	56:US:542:TRP:HA	1.76	0.50
4:UD:443:LEU:HD22	4:UD:456:LEU:HD11	1.93	0.50
7:UJ:664:LEU:O	7:UJ:667:SER:OG	2.29	0.50
15:UU:752:THR:OG1	15:UU:768:GLU:OE2	2.29	0.50
30:CP:49:ARG:HH12	30:CP:53:ASP:HB3	1.76	0.50
32:CR:5:LYS:NZ	32:CR:205:GLU:O	2.42	0.50
50:C1:934:A:H5''	50:C1:936:A:H5'	1.93	0.50
53:UT:176:SER:O	53:UT:180:VAL:HB	2.11	0.50
1:UA:195:ARG:NH1	50:C1:285:A:OP1	2.45	0.50
1:UA:705:GLN:HE21	15:UU:674:HIS:HE1	1.59	0.50
7:UJ:232:MET:HB3	7:UJ:243:ASN:HB3	1.93	0.50
7:UJ:563:TYR:H	7:UJ:568:LYS:NZ	2.09	0.50
11:UN:927:GLN:HE22	28:CM:339:LYS:NZ	2.09	0.50
32:CR:231:PRO:HA	32:CR:234:LYS:HE2	1.91	0.50
38:Ce:38:ALA:HA	38:Ce:39:ASP:HB2	1.93	0.50
38:Ce:50:VAL:HG21	38:Ce:68:VAL:HG22	1.94	0.50
43:Cj:35:PRO:HG2	43:Cj:38:LEU:HD12	1.94	0.50
50:C1:61:G:O6	54:UH:904:ARG:NH1	2.44	0.50
53:UT:1042:PRO:HB2	53:UT:1064:LEU:HD11	1.93	0.50
10:UM:349:PRO:HG3	10:UM:361:ILE:HG21	1.94	0.50
10:UM:520:GLN:HG2	10:UM:539:ARG:HB2	1.93	0.50
16:UX:104:PRO:HA	16:UX:107:ARG:HG3	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:CS:277:LEU:HB3	32:CS:406:TYR:HA	1.93	0.50
36:Cc:91:ASN:OD1	50:C1:2170:A:O2'	2.26	0.50
53:UT:107:LEU:HD21	53:UT:126:VAL:HG22	1.91	0.50
56:US:86:ARG:HA	56:US:89:VAL:HG22	1.93	0.50
1:UA:538:SER:OG	1:UA:541:GLU:O	2.29	0.50
2:UB:584:LEU:HD22	2:UB:625:LYS:HB2	1.92	0.50
7:UJ:521:PHE:O	7:UJ:525:ALA:HB2	2.11	0.50
10:UM:257:THR:OG1	10:UM:259:TRP:NE1	2.44	0.50
17:UZ:77:ARG:NH2	50:C1:373:C:O2'	2.45	0.50
29:CN:225:ILE:HD11	29:CN:241:PHE:HZ	1.76	0.50
32:CS:14:LEU:HA	32:CS:17:ASN:HD22	1.77	0.50
32:CS:565:HIS:CD2	32:CS:589:SER:HB2	2.47	0.50
35:Cb:160:VAL:HG11	35:Cb:169:ILE:HD12	1.92	0.50
40:Cg:50:ILE:HD13	40:Cg:78:LEU:HD21	1.93	0.50
40:Cg:126:LEU:HD23	40:Cg:129:GLN:HE21	1.77	0.50
54:UH:502:PHE:HD1	54:UH:541:VAL:HG21	1.76	0.50
1:UA:633:ALA:HB2	6:UG:175:GLN:HE21	1.76	0.50
4:UD:570:ILE:HD11	4:UD:626:LEU:HD11	1.94	0.50
4:UD:833:ARG:NH2	50:C1:64:C:OP1	2.44	0.50
12:UO:235:ILE:HD13	12:UO:251:SER:HB3	1.93	0.50
13:UQ:567:LEU:HD11	13:UQ:573:GLN:HG2	1.93	0.50
22:CG:184:TYR:HE1	22:CG:194:LYS:HG3	1.75	0.50
26:CK:80:LEU:HB3	26:CK:84:VAL:HG22	1.94	0.50
32:CS:725:VAL:HG12	32:CS:762:MET:HB2	1.94	0.50
35:Cb:42:MET:HE1	35:Cb:47:PHE:HD1	1.77	0.50
44:Ck:137:SER:O	44:Ck:141:ARG:NH1	2.44	0.50
45:Cm:32:LYS:HA	45:Cm:35:VAL:HG12	1.94	0.50
4:UD:686:ARG:NH1	50:C1:63:C:O2	2.44	0.50
7:UJ:654:ALA:O	7:UJ:658:SER:CB	2.58	0.50
10:UM:865:VAL:HG12	27:CL:679:PRO:HG3	1.94	0.50
19:CC:385:LYS:NZ	51:C2:194:G:OP1	2.37	0.50
21:CE:41:THR:HG23	21:CE:102:SER:HB2	1.93	0.50
22:CG:152:LEU:HB3	22:CG:156:LEU:HD23	1.94	0.50
32:CR:317:PRO:HD3	32:CR:371:TYR:CZ	2.47	0.50
32:CR:570:LEU:HB3	32:CR:584:CYS:HB3	1.92	0.50
35:Cb:19:LEU:HD11	35:Cb:108:ARG:HD2	1.94	0.50
41:Ch:108:ASP:OD1	41:Ch:111:SER:OG	2.30	0.50
51:C2:126:U:H4'	51:C2:127:A:H5''	1.94	0.50
2:UB:733:LEU:HD22	2:UB:780:LEU:HD21	1.94	0.50
4:UD:425:ILE:HD13	4:UD:431:ILE:HD11	1.92	0.50
6:UG:148:GLY:O	6:UG:166:ARG:NH2	2.44	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:UJ:794:PHE:HA	7:UJ:797:VAL:HG22	1.92	0.50
7:UJ:1500:LEU:HB3	7:UJ:1553:ILE:HG12	1.94	0.50
9:UL:71:THR:OG1	9:UL:113:ILE:O	2.25	0.50
9:UL:864:PHE:O	9:UL:867:ARG:O	2.30	0.50
13:UQ:846:VAL:HG22	13:UQ:852:VAL:HG12	1.93	0.50
23:CH:160:LEU:HA	23:CH:163:LEU:HD12	1.94	0.50
23:CH:222:ALA:HB2	23:CH:279:LEU:HD13	1.93	0.50
26:CK:89:LEU:HB2	26:CK:136:LEU:HD13	1.93	0.50
28:CM:95:ASP:OD1	28:CM:95:ASP:N	2.45	0.50
32:CR:181:VAL:HG22	32:CR:563:PRO:HG3	1.92	0.50
32:CR:284:THR:O	32:CR:473:THR:HA	2.11	0.50
32:CR:366:ARG:NH1	32:CS:383:ALA:O	2.42	0.50
50:C1:372:U:H3	50:C1:394:U:H3	1.59	0.50
53:UT:645:HIS:ND1	53:UT:647:GLU:OE1	2.40	0.50
53:UT:2092:ARG:NE	53:UT:2131:THR:OG1	2.44	0.50
2:UB:743:LEU:HG	56:US:462:GLN:NE2	2.25	0.50
7:UJ:201:LEU:HD11	7:UJ:254:VAL:HG13	1.94	0.50
7:UJ:296:LEU:HD22	7:UJ:312:LEU:HG	1.94	0.50
7:UJ:988:GLY:HA2	7:UJ:991:LEU:HB2	1.94	0.50
7:UJ:1425:LEU:HA	7:UJ:1429:ILE:HD11	1.94	0.50
7:UJ:1448:SER:O	7:UJ:1461:ARG:NH2	2.44	0.50
9:UL:25:VAL:HB	9:UL:40:ILE:HB	1.93	0.50
15:UU:885:GLN:NE2	15:UU:894:GLN:OE1	2.44	0.50
53:UT:2157:LEU:HA	53:UT:2160:ILE:HG22	1.94	0.50
59:CY:57:PHE:HD1	59:CY:60:LEU:HD12	1.77	0.50
1:UA:704:VAL:O	15:UU:720:ARG:NH2	2.43	0.50
7:UJ:1534:ARG:HG3	7:UJ:1598:TYR:HB3	1.94	0.50
22:CG:472:LEU:HB3	22:CG:475:SER:HB2	1.93	0.50
23:CH:232:ASN:O	23:CH:236:ILE:HG12	2.12	0.50
32:CR:914:LYS:HA	32:CR:917:ARG:HG2	1.93	0.50
5:UF:10:PHE:HB2	11:UN:912:LYS:HD3	1.94	0.49
9:UL:209:ILE:O	10:UM:743:GLN:NE2	2.44	0.49
32:CS:162:LEU:HA	32:CS:165:MET:HB2	1.94	0.49
32:CS:183:ALA:HB1	32:CS:186:ASN:HD21	1.77	0.49
32:CS:622:PHE:HZ	32:CS:782:PHE:HB2	1.77	0.49
32:CS:727:TYR:HE1	32:CS:762:MET:HE3	1.77	0.49
43:Cj:97:VAL:HG12	43:Cj:98:ASP:H	1.77	0.49
53:UT:617:LEU:HD12	53:UT:666:LEU:HG	1.94	0.49
56:US:142:ALA:HA	56:US:145:VAL:HG22	1.94	0.49
56:US:206:HIS:HA	56:US:209:THR:HG22	1.93	0.49
2:UB:471:ASP:OD2	2:UB:506:ARG:NH2	2.42	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:UJ:1623:SER:OG	7:UJ:1671:HIS:NE2	2.37	0.49
7:UJ:1800:MET:HG2	7:UJ:1801:LEU:HD12	1.94	0.49
10:UM:635:ILE:HG22	10:UM:636:ARG:HG3	1.94	0.49
15:UU:131:LEU:HD23	15:UU:162:TRP:CD2	2.46	0.49
15:UU:343:ILE:HG22	15:UU:354:THR:HG22	1.94	0.49
24:CI:93:THR:HG21	24:CI:334:LEU:HB2	1.93	0.49
28:CM:26:ASN:HB3	28:CM:31:LEU:HD22	1.94	0.49
29:CN:164:GLN:HB3	50:C1:2158:G:H5''	1.93	0.49
30:CP:160:THR:HG22	30:CP:173:GLY:HA3	1.94	0.49
53:UT:1036:LEU:HD22	53:UT:1094:LEU:HD11	1.93	0.49
53:UT:1100:TYR:O	53:UT:1104:ASN:ND2	2.45	0.49
7:UJ:758:ASN:OD1	7:UJ:759:GLU:N	2.45	0.49
7:UJ:1357:ASP:O	7:UJ:1368:ARG:NH2	2.45	0.49
7:UJ:1427:GLN:HB3	7:UJ:1428:HIS:ND1	2.27	0.49
7:UJ:1672:PHE:HA	7:UJ:1675:VAL:HG22	1.94	0.49
10:UM:442:ASP:HB3	10:UM:447:TRP:HB2	1.94	0.49
16:UX:110:LEU:HG	16:UX:114:ARG:HD2	1.94	0.49
19:CC:196:MET:HA	19:CC:199:ARG:HE	1.77	0.49
22:CG:123:PHE:HB2	35:Cb:105:THR:HG23	1.93	0.49
23:CH:209:ASN:HD21	23:CH:348:ARG:HB2	1.77	0.49
29:CO:190:ARG:HA	29:CO:193:VAL:HG22	1.93	0.49
32:CR:767:GLN:HG3	32:CR:769:GLY:H	1.76	0.49
32:CR:824:LEU:HB2	32:CR:869:ARG:HG3	1.94	0.49
4:UD:51:GLY:HA2	4:UD:77:VAL:HG23	1.94	0.49
7:UJ:1058:PRO:HG3	7:UJ:1105:LEU:HA	1.94	0.49
7:UJ:1284:LEU:HD21	7:UJ:1328:ALA:HA	1.94	0.49
14:UR:322:ARG:NH2	50:C1:133:G:H22	2.11	0.49
22:CG:151:ARG:HH12	22:CG:494:GLU:HA	1.76	0.49
32:CR:272:ILE:HG23	32:CR:307:TYR:HE2	1.76	0.49
32:CS:250:GLY:HA2	32:CS:253:ILE:HG22	1.94	0.49
32:CS:596:LYS:HA	32:CS:599:ILE:HD12	1.94	0.49
34:Ca:191:GLU:OE1	34:Ca:211:HIS:ND1	2.45	0.49
36:Cc:99:ARG:NH1	50:C1:2111:U:OP1	2.41	0.49
53:UT:1338:LEU:O	53:UT:1381:ARG:NH1	2.45	0.49
53:UT:1692:PRO:HA	53:UT:1695:LEU:HD12	1.95	0.49
2:UB:782:SER:HB3	2:UB:786:ARG:NH1	2.28	0.49
11:UN:354:ALA:HB2	19:CC:87:PRO:HG3	1.94	0.49
13:UQ:615:PHE:H	13:UQ:630:GLY:HA2	1.77	0.49
19:CC:299:MET:HG3	19:CC:307:GLN:HB2	1.95	0.49
26:CK:131:ALA:HB2	26:CK:139:ILE:HD11	1.94	0.49
32:CR:571:THR:HG22	32:CR:582:PRO:HA	1.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:CS:39:VAL:HG11	32:CS:94:PRO:HB3	1.94	0.49
34:Ca:26:ARG:HA	34:Ca:50:ARG:HH11	1.76	0.49
35:Cb:125:LYS:H	35:Cb:142:HIS:CD2	2.30	0.49
35:Cb:180:LEU:N	35:Cb:229:GLY:O	2.44	0.49
38:Ce:163:ILE:HA	38:Ce:194:GLU:O	2.12	0.49
40:Cg:36:ASN:HD21	40:Cg:38:ARG:NH2	2.11	0.49
53:UT:1479:ILE:HA	53:UT:1482:VAL:HG12	1.94	0.49
54:UH:736:LEU:O	54:UH:740:ASN:ND2	2.35	0.49
59:CY:316:GLU:O	59:CY:320:ARG:HG3	2.12	0.49
60:CZ:325:LEU:HD21	60:CZ:502:LEU:HB2	1.95	0.49
7:UJ:191:ASP:OD1	7:UJ:192:LEU:N	2.46	0.49
9:UL:60:ARG:HD2	9:UL:62:ARG:HH11	1.78	0.49
24:CI:346:ILE:HG12	24:CI:351:ILE:HG12	1.94	0.49
28:CM:422:GLU:O	28:CM:426:SER:HB2	2.13	0.49
32:CS:309:ASN:ND2	32:CS:382:GLN:O	2.45	0.49
50:C1:1029:A:H61	50:C1:1046:G:H1'	1.78	0.49
54:UH:789:LEU:HG	54:UH:793:MET:HE1	1.94	0.49
59:CY:96:LEU:HD23	59:CY:100:THR:HG21	1.94	0.49
2:UB:512:HIS:O	2:UB:519:ASN:ND2	2.38	0.49
13:UQ:466:LEU:HB2	13:UQ:832:ILE:HG12	1.95	0.49
14:UR:562:LYS:NZ	50:C1:237:G:OP1	2.43	0.49
15:UU:565:ILE:HB	15:UU:579:PHE:HB2	1.95	0.49
16:UX:13:ARG:HB3	25:CJ:19:ILE:HG13	1.95	0.49
19:CC:40:THR:HG22	19:CC:42:ASP:H	1.76	0.49
32:CR:158:SER:HA	32:CR:161:GLN:HB3	1.95	0.49
32:CS:38:ILE:HG12	32:CS:150:VAL:HG11	1.95	0.49
32:CS:570:LEU:HD22	32:CS:653:ALA:HB2	1.95	0.49
34:Ca:190:PRO:HG2	34:Ca:192:VAL:HG13	1.94	0.49
51:C2:35:G:OP2	51:C2:35:G:N2	2.36	0.49
59:CY:291:ARG:HA	59:CY:294:ARG:HG2	1.95	0.49
2:UB:692:LYS:HD3	2:UB:693:ASP:H	1.76	0.49
7:UJ:973:TYR:HD2	7:UJ:979:LEU:HB2	1.78	0.49
7:UJ:1524:SER:O	7:UJ:1583:TRP:NE1	2.46	0.49
8:UK:173:GLN:HB3	8:UK:177:LYS:NZ	2.28	0.49
9:UL:240:GLU:OE1	9:UL:274:HIS:ND1	2.46	0.49
13:UQ:521:PRO:HG3	55:UE:26:THR:HG21	1.94	0.49
15:UU:931:GLY:O	15:UU:934:LYS:C	2.56	0.49
18:CB:217:ARG:HH12	20:CD:8:GLU:HB2	1.76	0.49
19:CC:244:LEU:HD11	19:CC:250:LYS:HG2	1.95	0.49
20:CD:227:GLU:HG3	20:CD:228:ILE:HG23	1.94	0.49
32:CS:129:GLU:HA	32:CS:167:MET:HG2	1.92	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:CS:134:ASN:O	32:CS:138:ARG:HG2	2.13	0.49
34:Ca:36:ALA:HA	34:Ca:41:ARG:HH12	1.78	0.49
50:C1:799:U:O4	50:C1:800:A:N6	2.46	0.49
53:UT:419:LYS:HG3	53:UT:421:PRO:HD2	1.94	0.49
53:UT:1433:PRO:O	53:UT:1437:ASN:ND2	2.46	0.49
53:UT:1585:PHE:HD1	53:UT:1636:ARG:HH22	1.61	0.49
54:UH:862:HIS:C	54:UH:863:MET:HE2	2.37	0.49
7:UJ:492:PHE:CD1	7:UJ:533:ARG:HD2	2.48	0.49
7:UJ:1232:LEU:HD21	7:UJ:1252:LEU:HD22	1.94	0.49
9:UL:490:GLN:HG2	9:UL:502:THR:HG23	1.93	0.49
11:UN:910:MET:HE3	11:UN:914:THR:HG21	1.95	0.49
23:CH:249:ASP:OD1	23:CH:249:ASP:N	2.46	0.49
32:CR:68:THR:HG21	32:CR:73:LYS:HD3	1.95	0.49
32:CR:282:THR:HA	32:CR:410:MET:HB2	1.93	0.49
32:CR:388:ILE:HD11	32:CR:410:MET:HE3	1.95	0.49
32:CR:592:GLY:HA3	32:CR:631:SER:HA	1.95	0.49
32:CS:364:ASN:OD1	32:CS:365:HIS:ND1	2.42	0.49
35:Cb:212:ASP:O	35:Cb:215:ASP:N	2.45	0.49
37:Cd:160:ARG:O	37:Cd:173:THR:HA	2.13	0.49
41:Ch:136:PRO:HG2	41:Ch:139:TRP:HB2	1.94	0.49
51:C2:160:U:H2'	51:C2:161:G:H8	1.78	0.49
52:CW:167:GLU:HB2	52:CW:181:PRO:HB2	1.95	0.49
53:UT:279:SER:OG	53:UT:324:ARG:NH1	2.45	0.49
9:UL:429:ILE:HA	9:UL:445:ALA:HB2	1.93	0.49
15:UU:184:GLU:HG3	15:UU:186:THR:HG23	1.95	0.49
15:UU:526:TRP:O	15:UU:529:ARG:NH1	2.39	0.49
32:CS:828:GLU:HA	32:CS:831:GLN:HG3	1.95	0.49
35:Cb:116:ASP:O	35:Cb:120:LYS:HG3	2.13	0.49
53:UT:270:LEU:H	53:UT:317:THR:HG21	1.78	0.49
53:UT:431:SER:HG	53:UT:472:ARG:HH22	1.60	0.49
53:UT:964:LEU:HD11	53:UT:998:LEU:HD11	1.95	0.49
53:UT:1349:ARG:NH1	53:UT:1429:ASP:OD2	2.46	0.49
59:CY:118:ALA:HB2	60:CZ:311:GLY:HA3	1.93	0.49
61:UP:308:LYS:NZ	61:UP:309:ASN:O	2.40	0.49
4:UD:262:ASP:HB2	14:UR:450:ARG:HE	1.78	0.48
7:UJ:801:ILE:HB	7:UJ:805:LEU:HD11	1.94	0.48
8:UK:117:ASN:HB3	51:C2:260:G:H4'	1.95	0.48
18:CB:188:ARG:HA	18:CB:191:ARG:HD3	1.95	0.48
25:CJ:137:ARG:NH1	25:CJ:160:TRP:O	2.46	0.48
34:Ca:25:THR:O	34:Ca:50:ARG:NH1	2.46	0.48
34:Ca:126:THR:HG22	34:Ca:136:ARG:HG3	1.94	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:C2:162:C:O2'	51:C2:164:U:OP2	2.30	0.48
4:UD:54:GLU:OE1	4:UD:65:GLN:NE2	2.45	0.48
4:UD:680:GLU:HG3	4:UD:683:ARG:HH22	1.78	0.48
5:UF:359:GLU:O	5:UF:363:ARG:HG3	2.13	0.48
7:UJ:1268:VAL:HG11	7:UJ:1287:LEU:HD21	1.95	0.48
9:UL:597:LEU:HB2	49:CU:98:VAL:HG21	1.94	0.48
13:UQ:264:GLY:HA2	13:UQ:280:ARG:O	2.12	0.48
18:CA:214:MET:HE3	18:CA:217:ARG:NH1	2.28	0.48
22:CG:287:HIS:CE1	22:CG:313:LYS:HD2	2.48	0.48
24:CI:607:LYS:O	24:CI:611:SER:HB3	2.14	0.48
26:CK:185:SER:OG	50:C1:2207:C:OP1	2.31	0.48
32:CR:38:ILE:HD11	32:CR:152:LEU:HD21	1.95	0.48
32:CS:744:PRO:HA	32:CS:761:VAL:O	2.12	0.48
38:Ce:50:VAL:HG23	38:Ce:51:SER:H	1.77	0.48
50:C1:1623:U:H5''	50:C1:1624:A:H2'	1.95	0.48
53:UT:191:ALA:HA	53:UT:194:MET:HB3	1.94	0.48
53:UT:1756:ASP:O	53:UT:1759:SER:OG	2.27	0.48
7:UJ:1001:PRO:O	7:UJ:1005:ASN:ND2	2.38	0.48
10:UM:563:SER:OG	10:UM:564:GLN:N	2.46	0.48
21:CF:25:VAL:HG22	21:CF:103:LEU:HD11	1.94	0.48
24:CI:827:LEU:H	24:CI:863:THR:HG22	1.78	0.48
32:CS:29:VAL:HA	32:CS:202:ILE:O	2.12	0.48
37:Cd:2:LYS:HB2	37:Cd:108:VAL:HG22	1.95	0.48
47:Co:345:ARG:O	47:Co:351:ARG:O	2.31	0.48
53:UT:1729:ASN:HA	53:UT:1732:LEU:HD22	1.95	0.48
53:UT:1751:ARG:O	53:UT:1755:ARG:HG3	2.13	0.48
54:UH:847:ARG:NH2	55:UI:231:THR:O	2.44	0.48
58:CX:413:CYS:HA	58:CX:416:VAL:HG12	1.95	0.48
1:UA:264:HIS:HB2	1:UA:305:ILE:HD13	1.95	0.48
7:UJ:1522:LEU:HA	7:UJ:1525:ILE:HG12	1.94	0.48
9:UL:835:GLN:OE1	10:UM:821:ARG:NH2	2.39	0.48
10:UM:85:MET:HE3	10:UM:109:PRO:HG3	1.96	0.48
11:UN:275:ASP:OD1	11:UN:275:ASP:N	2.45	0.48
16:UX:152:ASP:OD1	16:UX:152:ASP:N	2.45	0.48
20:CD:304:HIS:CD2	20:CD:322:LEU:HD22	2.48	0.48
22:CG:391:SER:HB3	22:CG:438:LEU:HD11	1.96	0.48
23:CH:219:ARG:HA	23:CH:251:HIS:O	2.13	0.48
32:CR:425:SER:O	32:CR:429:ILE:HB	2.14	0.48
50:C1:927:C:H3'	60:CZ:537:ARG:HH22	1.78	0.48
53:UT:1277:ILE:HG21	53:UT:1282:LEU:HD13	1.94	0.48
54:UH:575:SER:HA	54:UH:578:ILE:HG22	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:UD:758:ARG:HD2	4:UD:768:TRP:HB3	1.95	0.48
7:UJ:256:SER:O	7:UJ:295:GLN:NE2	2.46	0.48
7:UJ:850:THR:O	7:UJ:854:GLU:HG2	2.13	0.48
13:UQ:568:THR:HG22	55:UE:262:LYS:HZ2	1.77	0.48
14:UR:288:ILE:HD12	14:UR:315:LEU:HD11	1.95	0.48
14:UR:570:HIS:ND1	14:UR:573:SER:OG	2.34	0.48
18:CB:228:ALA:HB3	18:CB:255:ILE:HG13	1.96	0.48
18:CB:258:LYS:HZ1	18:CB:261:CYS:HB2	1.78	0.48
23:CH:25:THR:HG21	23:CH:57:LEU:HD11	1.95	0.48
24:CI:246:ILE:HB	24:CI:798:ILE:HB	1.95	0.48
31:CQ:170:ASP:OD1	31:CQ:214:SER:OG	2.27	0.48
32:CR:748:ARG:NH2	32:CR:750:THR:O	2.46	0.48
45:Cm:105:THR:HG22	45:Cm:110:ILE:HG12	1.94	0.48
50:C1:781:G:H2'	50:C1:782:G:H8	1.77	0.48
53:UT:1064:LEU:HD23	53:UT:1068:LYS:HB3	1.95	0.48
53:UT:2005:LYS:HD2	53:UT:2050:LEU:HD11	1.95	0.48
1:UA:316:ALA:O	1:UA:320:GLY:C	2.57	0.48
4:UD:249:ILE:HB	4:UD:261:TRP:HB2	1.94	0.48
9:UL:275:ARG:NH2	9:UL:279:GLU:O	2.47	0.48
20:CD:4:PHE:O	20:CD:88:LEU:HA	2.13	0.48
28:CM:282:HIS:O	28:CM:408:LYS:NZ	2.46	0.48
32:CR:834:THR:O	32:CR:838:HIS:ND1	2.42	0.48
34:Ca:204:ILE:O	50:C1:1648:G:O2'	2.31	0.48
45:Cm:85:GLU:HA	49:CU:300:VAL:HG21	1.96	0.48
50:C1:2067:G:N2	50:C1:2189:C:O2	2.45	0.48
56:US:236:SER:O	56:US:239:SER:OG	2.29	0.48
60:CZ:392:ARG:NH1	60:CZ:406:THR:OG1	2.47	0.48
1:UA:316:ALA:O	1:UA:321:GLN:HB2	2.13	0.48
7:UJ:1429:ILE:HD12	7:UJ:1433:ILE:HD11	1.95	0.48
10:UM:699:LEU:HD12	10:UM:710:SER:HB3	1.95	0.48
12:UO:499:VAL:HG23	55:UE:259:LEU:HD22	1.95	0.48
15:UU:978:LEU:HD22	15:UU:991:THR:HG23	1.96	0.48
28:CM:225:PHE:HA	28:CM:232:PRO:HA	1.95	0.48
28:CM:319:ASP:HA	28:CM:395:ARG:HH12	1.78	0.48
38:Ce:20:SER:OG	38:Ce:21:ASP:N	2.46	0.48
53:UT:1076:LEU:O	53:UT:1080:ILE:HG12	2.14	0.48
54:UH:701:GLU:OE1	54:UH:705:ARG:NH2	2.39	0.48
59:CY:25:ALA:HB2	60:CZ:369:THR:HG23	1.95	0.48
55:UI:158:ASN:HB2	55:UI:162:ARG:HH12	1.78	0.48
1:UA:787:MET:HE2	1:UA:787:MET:HB3	1.73	0.48
4:UD:358:GLY:O	4:UD:751:SER:OG	2.30	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:UJ:275:VAL:HG12	7:UJ:315:LEU:HD21	1.96	0.48
7:UJ:1662:GLN:HG3	7:UJ:1664:GLY:H	1.78	0.48
15:UU:713:PHE:HA	15:UU:723:VAL:O	2.14	0.48
18:CA:164:GLY:HA3	18:CA:196:MET:HE2	1.95	0.48
49:CU:163:ARG:O	49:CU:167:GLU:HG2	2.14	0.48
4:UD:122:LYS:HE2	4:UD:123:LYS:HE2	1.95	0.48
4:UD:775:ASP:OD1	13:UQ:345:THR:OG1	2.31	0.48
7:UJ:1434:THR:HA	7:UJ:1437:TYR:CE2	2.48	0.48
24:CI:133:ALA:O	24:CI:238:ARG:NH2	2.43	0.48
24:CI:762:GLU:O	24:CI:766:ARG:HB3	2.14	0.48
46:Cn:53:VAL:O	46:Cn:99:ASN:HA	2.14	0.48
53:UT:414:GLN:O	53:UT:418:THR:OG1	2.23	0.48
53:UT:1472:THR:HA	53:UT:1475:GLN:HB2	1.96	0.48
53:UT:1562:ASN:O	53:UT:1565:ARG:O	2.31	0.48
7:UJ:1383:GLN:HE21	7:UJ:1428:HIS:HB3	1.79	0.48
10:UM:692:HIS:CG	10:UM:696:LEU:HD21	2.49	0.48
19:CC:284:MET:HE3	20:CD:267:ARG:NE	2.29	0.48
24:CI:942:LEU:HB3	27:CL:517:LEU:HD11	1.96	0.48
32:CS:586:ILE:HG12	32:CS:638:ILE:HG13	1.94	0.48
37:Cd:15:LEU:HD22	50:C1:737:G:H4'	1.96	0.48
52:CW:136:PRO:HG2	60:CZ:544:LEU:HD22	1.95	0.48
52:CW:152:LEU:HD23	52:CW:170:ARG:HG2	1.95	0.48
56:US:112:ASN:OD1	56:US:113:TRP:N	2.47	0.48
4:UD:554:PHE:HE1	4:UD:561:LEU:HD13	1.79	0.47
7:UJ:1158:LEU:HD21	7:UJ:1170:LEU:HD21	1.96	0.47
10:UM:208:ARG:HH12	10:UM:221:TYR:HE1	1.61	0.47
13:UQ:158:VAL:O	13:UQ:165:ILE:HA	2.13	0.47
13:UQ:812:LEU:HA	13:UQ:823:LEU:O	2.14	0.47
17:UZ:158:ARG:HD3	17:UZ:185:MET:HE3	1.95	0.47
24:CI:1116:ARG:HG2	24:CI:1120:LYS:HE3	1.96	0.47
30:CP:151:LEU:O	30:CP:155:GLU:HG3	2.14	0.47
32:CR:331:PHE:HB3	32:CR:336:TYR:HB2	1.96	0.47
32:CR:574:ILE:HG22	32:CR:576:GLU:H	1.78	0.47
32:CS:868:GLY:HA2	32:CS:871:ARG:HB2	1.96	0.47
36:Cc:176:THR:HG22	36:Cc:179:GLU:HG2	1.96	0.47
37:Cd:32:MET:HG3	37:Cd:100:CYS:HB2	1.96	0.47
37:Cd:159:ARG:HD3	37:Cd:175:ALA:HB2	1.96	0.47
53:UT:1911:VAL:HG11	53:UT:1973:VAL:HG21	1.95	0.47
53:UT:2079:LEU:HD22	53:UT:2115:THR:HG21	1.95	0.47
1:UA:97:SER:HB3	1:UA:115:LEU:HD23	1.95	0.47
7:UJ:501:THR:HG22	7:UJ:503:THR:H	1.79	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:UM:628:ASN:HB2	10:UM:635:ILE:HD11	1.94	0.47
11:UN:282:LEU:HD22	53:UT:2158:LYS:HE3	1.96	0.47
18:CA:251:GLY:O	18:CA:305:VAL:HA	2.14	0.47
20:CD:292:LEU:O	20:CD:398:ARG:NH1	2.47	0.47
24:CI:302:LEU:O	24:CI:776:TYR:HB3	2.14	0.47
27:CL:721:LYS:NZ	50:C1:1729:U:OP1	2.41	0.47
32:CS:212:SER:O	32:CS:215:LYS:NZ	2.45	0.47
32:CS:512:ASP:OD1	32:CS:514:SER:OG	2.27	0.47
32:CS:851:TYR:HA	32:CS:854:VAL:HB	1.96	0.47
37:Cd:137:ARG:HB2	37:Cd:140:LYS:HG3	1.96	0.47
40:Cg:139:VAL:HG13	59:CY:257:GLY:HA3	1.96	0.47
47:Co:385:GLN:HA	47:Co:413:LEU:HD13	1.96	0.47
53:UT:621:LEU:O	53:UT:625:GLN:NE2	2.47	0.47
53:UT:677:LEU:HD23	53:UT:680:THR:HG23	1.95	0.47
56:US:300:PRO:HD2	56:US:332:ARG:HH11	1.76	0.47
58:CX:374:ARG:HH21	58:CX:416:VAL:HG23	1.78	0.47
60:CZ:330:ARG:HA	60:CZ:333:LYS:HD3	1.95	0.47
60:CZ:572:LEU:O	60:CZ:576:LEU:HB3	2.13	0.47
2:UB:21:PRO:HB3	50:C1:1732:C:H1'	1.97	0.47
3:UC:221:LEU:HB3	27:CL:64:LEU:HD11	1.96	0.47
6:UG:439:LYS:NZ	50:C1:426:A:OP2	2.47	0.47
15:UU:927:LYS:HB3	15:UU:927:LYS:HE2	1.74	0.47
23:CH:188:GLY:O	23:CH:273:THR:OG1	2.31	0.47
24:CI:938:PHE:HA	27:CL:511:ARG:HH22	1.80	0.47
28:CM:261:ASP:OD2	28:CM:263:ASN:ND2	2.47	0.47
30:CP:207:LEU:HD11	30:CP:221:TYR:HB2	1.96	0.47
36:Cc:82:ASN:OD1	36:Cc:94:LYS:NZ	2.47	0.47
44:Ck:111:ASN:HD22	44:Ck:111:ASN:C	2.18	0.47
50:C1:331:C:N4	50:C1:332:U:O4	2.47	0.47
53:UT:1090:TYR:HB3	53:UT:1094:LEU:HD13	1.96	0.47
53:UT:1286:VAL:HA	53:UT:1289:VAL:HG22	1.97	0.47
53:UT:1765:LEU:HD23	53:UT:1773:ILE:HD11	1.96	0.47
4:UD:283:SER:HB3	4:UD:329:MET:HG3	1.96	0.47
7:UJ:284:LEU:HD13	7:UJ:288:ILE:HG21	1.96	0.47
7:UJ:1053:ILE:HD13	7:UJ:1082:PHE:HZ	1.78	0.47
12:UO:323:ILE:HB	12:UO:333:HIS:HB2	1.97	0.47
15:UU:752:THR:N	15:UU:766:ALA:O	2.37	0.47
22:CG:314:VAL:HG13	22:CG:323:VAL:HB	1.96	0.47
29:CO:180:LEU:HD11	29:CO:241:PHE:CE2	2.48	0.47
39:Cf:76:THR:HG22	39:Cf:108:PRO:HG2	1.96	0.47
48:Cp:13:VAL:O	48:Cp:52:ASN:CA	2.62	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:UT:945:ILE:HA	53:UT:948:TRP:HE3	1.78	0.47
58:CX:296:LEU:HD13	58:CX:331:ILE:HD12	1.96	0.47
59:CY:44:LYS:HB3	60:CZ:321:PHE:HZ	1.79	0.47
4:UD:626:LEU:HD12	4:UD:630:PRO:HG3	1.95	0.47
7:UJ:166:PHE:CG	7:UJ:185:GLN:HG3	2.49	0.47
7:UJ:755:LEU:O	7:UJ:802:ARG:NH2	2.47	0.47
8:UK:24:ARG:NH2	50:C1:2091:C:OP2	2.48	0.47
10:UM:604:GLY:HA2	10:UM:636:ARG:HE	1.80	0.47
13:UQ:847:ASP:O	13:UQ:850:ALA:HA	2.15	0.47
15:UU:69:ARG:NH1	15:UU:91:PRO:O	2.47	0.47
18:CA:194:ILE:HD11	19:CC:162:SER:HB3	1.96	0.47
22:CG:416:GLY:HA2	22:CG:466:ILE:HG13	1.95	0.47
25:CJ:66:PRO:HB2	26:CK:64:ILE:HD12	1.96	0.47
43:Cj:45:ARG:HA	43:Cj:48:LEU:HD12	1.96	0.47
46:Cn:130:VAL:HG13	46:Cn:140:LYS:HD3	1.97	0.47
47:Co:382:GLN:HB3	47:Co:385:GLN:HG2	1.95	0.47
53:UT:1960:TYR:HA	53:UT:1963:THR:HG22	1.97	0.47
4:UD:709:MET:O	4:UD:826:TRP:HA	2.14	0.47
8:UK:68:MET:HE2	51:C2:58:A:H5'	1.96	0.47
17:UZ:126:ARG:NH1	50:C1:2061:G:OP1	2.47	0.47
20:CD:17:LYS:N	20:CD:44:LYS:O	2.37	0.47
23:CH:160:LEU:HD23	23:CH:335:VAL:HB	1.95	0.47
24:CI:753:ASN:O	24:CI:754:LYS:HG2	2.14	0.47
29:CN:91:ILE:HD12	29:CN:94:GLN:HE21	1.79	0.47
29:CN:130:ILE:HD11	29:CN:137:PHE:HD1	1.79	0.47
32:CR:660:TYR:HB2	32:CR:712:LEU:HD13	1.95	0.47
43:Cj:86:ALA:HB1	43:Cj:109:LEU:HD13	1.97	0.47
47:Co:346:ASN:CB	47:Co:351:ARG:O	2.62	0.47
53:UT:299:SER:OG	53:UT:340:ARG:NH1	2.47	0.47
59:CY:62:LYS:HB3	60:CZ:341:PHE:HD2	1.80	0.47
55:UI:211:ALA:HB1	55:UI:214:LEU:HB2	1.96	0.47
2:UB:769:LEU:HD23	2:UB:774:THR:HG22	1.95	0.47
4:UD:549:VAL:HG21	4:UD:563:VAL:HB	1.95	0.47
4:UD:560:MET:HE1	4:UD:661:PRO:HB2	1.97	0.47
4:UD:693:VAL:HG21	4:UD:838:ILE:HG22	1.96	0.47
5:UF:287:ARG:HD2	5:UF:327:LEU:HD11	1.97	0.47
9:UL:395:GLU:OE1	9:UL:397:TYR:OH	2.29	0.47
9:UL:469:LEU:HD11	9:UL:485:LYS:HG2	1.97	0.47
10:UM:276:LEU:HD21	34:Ca:50:ARG:HD2	1.96	0.47
12:UO:513:VAL:HG11	55:UE:270:LEU:HD21	1.95	0.47
13:UQ:106:THR:HG22	13:UQ:111:ILE:HG12	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:UQ:154:ASP:O	13:UQ:169:ASN:ND2	2.48	0.47
13:UQ:379:LEU:HB3	13:UQ:392:LEU:HB3	1.96	0.47
15:UU:711:ASN:HD21	15:UU:727:GLN:NE2	2.13	0.47
17:UZ:282:TYR:HB3	17:UZ:290:ALA:HB1	1.97	0.47
18:CB:235:GLN:HG2	18:CB:255:ILE:HD11	1.96	0.47
21:CF:11:LYS:HA	21:CF:81:TYR:HB2	1.97	0.47
24:CI:277:THR:HG22	24:CI:278:ASN:H	1.78	0.47
24:CI:917:LYS:NZ	50:C1:1142:U:OP1	2.42	0.47
27:CL:52:LEU:O	27:CL:57:PRO:HD2	2.14	0.47
31:CQ:87:ILE:HG12	31:CQ:95:LEU:HD22	1.97	0.47
32:CR:729:LEU:HD21	32:CR:805:ILE:HD11	1.95	0.47
32:CR:912:PHE:O	32:CR:916:MET:HG2	2.14	0.47
40:Cg:169:ARG:HA	40:Cg:172:ARG:HE	1.80	0.47
2:UB:572:ARG:HG3	2:UB:610:VAL:HG22	1.97	0.47
4:UD:841:ILE:HG13	4:UD:859:GLU:HB3	1.95	0.47
6:UG:570:ARG:HH12	50:C1:325:C:H3'	1.80	0.47
7:UJ:782:VAL:O	7:UJ:812:ARG:NH2	2.48	0.47
15:UU:644:GLY:HA3	15:UU:663:ALA:HA	1.96	0.47
22:CG:184:TYR:CE1	22:CG:194:LYS:HG3	2.49	0.47
23:CH:168:PRO:HA	23:CH:171:ILE:HB	1.97	0.47
24:CI:246:ILE:HG21	24:CI:270:LEU:HD22	1.95	0.47
24:CI:825:LYS:NZ	50:C1:1162:U:O3'	2.47	0.47
26:CK:143:HIS:HB2	26:CK:151:ALA:HB3	1.96	0.47
32:CS:601:LYS:O	32:CS:605:ARG:HG2	2.15	0.47
36:Cc:133:SER:OG	36:Cc:144:ARG:NH2	2.48	0.47
53:UT:242:MET:SD	53:UT:245:THR:OG1	2.65	0.47
53:UT:687:LEU:HD12	53:UT:725:TRP:HH2	1.80	0.47
3:UC:230:ASP:OD1	27:CL:60:ARG:NH2	2.47	0.47
4:UD:698:ARG:HD2	4:UD:709:MET:SD	2.54	0.47
6:UG:114:GLN:HB3	6:UG:129:LYS:HE2	1.97	0.47
7:UJ:500:PRO:HB3	7:UJ:539:VAL:HA	1.96	0.47
7:UJ:1558:HIS:HB2	7:UJ:1605:GLY:HA3	1.97	0.47
10:UM:89:SER:OG	10:UM:102:THR:OG1	2.30	0.47
13:UQ:450:ALA:HB2	13:UQ:458:PRO:HG2	1.97	0.47
18:CB:156:VAL:HG23	18:CB:180:VAL:HG23	1.97	0.47
23:CH:177:GLN:HB3	23:CH:190:GLY:HA2	1.97	0.47
31:CQ:233:VAL:HA	31:CQ:236:VAL:HG12	1.95	0.47
32:CR:224:ASP:HB3	32:CR:227:GLU:HG3	1.95	0.47
32:CS:158:SER:HB2	32:CS:691:GLY:HA3	1.96	0.47
38:Ce:76:PHE:O	38:Ce:79:VAL:O	2.33	0.47
44:Ck:84:LYS:NZ	44:Ck:124:GLU:OE2	2.47	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:CX:344:THR:O	58:CX:347:ASP:C	2.58	0.47
2:UB:527:SER:HB3	2:UB:559:LEU:HD22	1.97	0.47
4:UD:697:GLN:OE1	4:UD:713:SER:N	2.48	0.47
6:UG:348:VAL:HA	6:UG:357:ALA:O	2.15	0.47
7:UJ:1105:LEU:HD13	7:UJ:1110:PHE:CD2	2.50	0.47
7:UJ:1667:GLN:CD	7:UJ:1713:VAL:HB	2.39	0.47
9:UL:375:ALA:O	9:UL:384:GLN:HB2	2.14	0.47
9:UL:695:HIS:NE2	9:UL:713:SER:OG	2.39	0.47
14:UR:178:GLN:OE1	14:UR:181:ARG:NH1	2.48	0.47
15:UU:35:PHE:HB3	15:UU:776:TRP:HB3	1.97	0.47
15:UU:121:VAL:HB	15:UU:129:ALA:HB3	1.97	0.47
22:CG:444:LEU:HD11	22:CG:455:PRO:HA	1.97	0.47
29:CN:100:LEU:HD13	29:CN:105:ASN:HD21	1.80	0.47
32:CR:516:CYS:HB3	32:CR:570:LEU:HD11	1.97	0.47
42:CI:49:ARG:HG3	50:C1:1504:A:HI'	1.97	0.47
53:UT:1855:GLU:HB2	53:UT:1895:ARG:HG3	1.97	0.47
56:US:174:LEU:HD21	56:US:226:LEU:HD21	1.96	0.47
5:UF:20:ARG:NH1	5:UF:24:GLU:OE2	2.48	0.46
5:UF:278:ILE:HG23	11:UN:373:ILE:HD12	1.97	0.46
7:UJ:586:ASP:OD1	7:UJ:587:LYS:N	2.48	0.46
7:UJ:712:GLY:O	7:UJ:716:GLU:HG3	2.15	0.46
9:UL:133:ASP:OD1	9:UL:149:ARG:NH1	2.41	0.46
9:UL:481:ILE:HD11	9:UL:489:LEU:HB3	1.97	0.46
10:UM:755:ARG:HG3	10:UM:793:ALA:HB1	1.97	0.46
14:UR:157:LEU:O	14:UR:174:ARG:NH1	2.42	0.46
15:UU:120:TRP:CD1	15:UU:130:GLU:HG2	2.50	0.46
18:CB:191:ARG:HH11	20:CD:154:LEU:HD22	1.80	0.46
19:CC:113:PHE:HB2	19:CC:116:VAL:HG12	1.97	0.46
19:CC:332:PRO:O	19:CC:335:THR:OG1	2.27	0.46
26:CK:140:ILE:HA	26:CK:153:THR:O	2.15	0.46
30:CP:290:LYS:NZ	50:C1:900:A:OP1	2.39	0.46
51:C2:164:U:O2	51:C2:166:G:N2	2.45	0.46
53:UT:1313:LEU:HD23	53:UT:1313:LEU:HA	1.82	0.46
7:UJ:648:ASP:OD1	7:UJ:651:ALA:N	2.44	0.46
9:UL:568:ILE:HA	9:UL:584:LEU:HD23	1.97	0.46
13:UQ:292:THR:HG23	13:UQ:361:VAL:HG12	1.96	0.46
15:UU:723:VAL:HG22	15:UU:733:VAL:HG22	1.96	0.46
32:CS:364:ASN:OD1	32:CS:365:HIS:N	2.48	0.46
35:Cb:100:ARG:HH12	35:Cb:122:LYS:HA	1.80	0.46
46:Cn:53:VAL:O	46:Cn:99:ASN:N	2.47	0.46
47:Co:346:ASN:ND2	47:Co:351:ARG:HE	2.13	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:Co:365:ASN:ND2	50:C1:1105:A:N3	2.62	0.46
50:C1:1097:U:H2'	50:C1:1098:G:C8	2.50	0.46
53:UT:116:LYS:NZ	53:UT:159:GLU:OE2	2.46	0.46
53:UT:776:VAL:HG11	53:UT:843:ALA:HB3	1.98	0.46
53:UT:1757:THR:O	53:UT:1761:ILE:HG12	2.14	0.46
55:UE:156:VAL:HG21	56:US:301:GLU:HG2	1.96	0.46
56:US:185:PHE:HA	56:US:189:PHE:HD2	1.79	0.46
3:UC:285:ARG:NH1	27:CL:138:GLN:OE1	2.45	0.46
6:UG:278:GLN:HA	6:UG:302:PRO:HB3	1.97	0.46
7:UJ:1102:ILE:HD13	7:UJ:1105:LEU:HD12	1.97	0.46
16:UX:135:VAL:HG13	16:UX:160:ILE:HD11	1.97	0.46
19:CC:94:SER:N	50:C1:454:C:OP1	2.48	0.46
19:CC:217:ILE:HG22	19:CC:221:LYS:NZ	2.30	0.46
24:CI:129:MET:HA	24:CI:132:VAL:HG12	1.97	0.46
32:CS:201:VAL:HG22	32:CS:212:SER:HB3	1.97	0.46
39:Cf:74:ARG:HH12	53:UT:1025:ARG:CZ	2.29	0.46
40:Cg:166:ARG:HH21	40:Cg:172:ARG:NH1	2.14	0.46
47:Co:376:ALA:O	47:Co:379:TYR:O	2.34	0.46
53:UT:366:GLN:HA	53:UT:369:VAL:HG22	1.98	0.46
53:UT:474:VAL:HG21	53:UT:540:SER:HB3	1.97	0.46
53:UT:2150:ARG:HH22	53:UT:2190:PHE:HE1	1.61	0.46
55:UE:155:THR:HA	55:UE:158:ASN:HD22	1.79	0.46
2:UB:65:ARG:HD2	50:C1:2047:G:H5'	1.96	0.46
4:UD:453:VAL:HG23	4:UD:472:VAL:HB	1.96	0.46
6:UG:434:ASN:HB3	6:UG:437:GLU:HG3	1.98	0.46
7:UJ:45:PHE:HA	7:UJ:48:ILE:HD12	1.97	0.46
7:UJ:991:LEU:O	7:UJ:995:ILE:HG13	2.15	0.46
7:UJ:1190:LEU:HB2	7:UJ:1244:LEU:HD22	1.96	0.46
10:UM:137:ILE:HD11	10:UM:198:LEU:HD22	1.96	0.46
13:UQ:116:THR:HA	13:UQ:432:MET:SD	2.56	0.46
14:UR:253:ARG:NH2	14:UR:256:LEU:HD11	2.30	0.46
15:UU:427:GLN:NE2	50:C1:256:U:OP1	2.47	0.46
23:CH:64:SER:HB3	23:CH:77:TYR:HE1	1.81	0.46
39:Cf:11:ARG:NH1	39:Cf:15:GLY:O	2.48	0.46
54:UH:555:GLY:N	54:UH:568:THR:O	2.49	0.46
56:US:427:GLU:HA	56:US:430:LYS:HG3	1.98	0.46
57:Cl:8:LYS:NZ	57:Cl:60:GLU:O	2.49	0.46
1:UA:588:LEU:HD23	1:UA:678:VAL:HB	1.97	0.46
1:UA:594:LYS:HE2	1:UA:595:TYR:CZ	2.51	0.46
7:UJ:260:VAL:HB	7:UJ:295:GLN:HE21	1.81	0.46
7:UJ:396:TYR:HE2	7:UJ:442:ILE:HD11	1.80	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:UJ:1500:LEU:HD23	7:UJ:1553:ILE:HG12	1.96	0.46
10:UM:207:ILE:HB	10:UM:220:VAL:HB	1.96	0.46
20:CD:258:LYS:HB3	20:CD:258:LYS:HE3	1.77	0.46
23:CH:81:LEU:HG	24:CI:910:GLU:HG2	1.96	0.46
24:CI:1085:ARG:O	24:CI:1089:LYS:HG2	2.15	0.46
28:CM:258:ALA:HB2	28:CM:289:VAL:HB	1.96	0.46
50:C1:3:G:H1	50:C1:32:U:H3	1.63	0.46
53:UT:377:GLN:HA	53:UT:380:VAL:HG12	1.98	0.46
54:UH:308:ASP:HB3	54:UH:348:ARG:HH12	1.80	0.46
55:UE:182:GLN:HB3	55:UE:220:TRP:CD1	2.51	0.46
59:CY:95:TYR:HD1	60:CZ:453:LEU:HD13	1.80	0.46
60:CZ:539:SER:H	60:CZ:542:ARG:HH21	1.64	0.46
1:UA:845:LEU:HD23	15:UU:1013:LEU:HD22	1.98	0.46
12:UO:255:ILE:HG12	12:UO:269:ILE:HB	1.97	0.46
13:UQ:392:LEU:HD22	13:UQ:428:MET:HE3	1.98	0.46
17:UZ:169:LYS:HE2	17:UZ:173:LYS:HD3	1.97	0.46
24:CI:1096:LYS:HG3	33:CT:178:TYR:HB2	1.97	0.46
30:CP:188:THR:HG23	30:CP:194:PRO:HD3	1.97	0.46
32:CR:612:ASP:HB3	32:CR:615:PRO:HD2	1.97	0.46
39:Cf:193:LEU:O	39:Cf:197:GLN:HG3	2.16	0.46
40:Cg:128:ARG:HH21	50:C1:1058:A:H4'	1.81	0.46
43:Cj:72:GLY:O	50:C1:2065:C:O2'	2.29	0.46
58:CX:365:TYR:HE1	58:CX:409:ILE:HG12	1.81	0.46
4:UD:625:LYS:HB3	7:UJ:670:HIS:CD2	2.50	0.46
9:UL:632:ARG:NH1	9:UL:641:CYS:SG	2.87	0.46
13:UQ:811:LEU:HD21	13:UQ:855:ILE:HD13	1.97	0.46
14:UR:421:ALA:HB2	14:UR:437:ARG:HG3	1.98	0.46
19:CC:228:ASN:OD1	19:CC:229:LYS:N	2.48	0.46
20:CD:78:ASN:HD22	20:CD:81:LYS:HD2	1.80	0.46
25:CJ:83:TYR:OH	26:CK:15:ARG:NH1	2.42	0.46
32:CS:218:LYS:NZ	32:CS:219:PRO:O	2.38	0.46
32:CS:805:ILE:O	32:CS:808:SER:OG	2.24	0.46
32:CS:825:THR:N	32:CS:828:GLU:OE1	2.36	0.46
34:Ca:129:THR:HG22	34:Ca:133:TYR:H	1.81	0.46
34:Ca:129:THR:OG1	34:Ca:179:CYS:O	2.33	0.46
49:CU:126:ASP:O	49:CU:129:ARG:NH1	2.41	0.46
52:CW:143:ALA:HB3	52:CW:152:LEU:HB2	1.98	0.46
53:UT:232:ILE:HA	53:UT:235:VAL:HG22	1.97	0.46
54:UH:780:MET:HG2	54:UH:815:PHE:HZ	1.81	0.46
8:UK:268:ARG:HH11	21:CE:95:SER:HB3	1.81	0.46
9:UL:24:LEU:HD11	9:UL:388:GLY:HA3	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:UO:99:ASP:HA	57:Cl:25:LYS:HD3	1.97	0.46
15:UU:325:SER:HB2	15:UU:446:LEU:HG	1.98	0.46
25:CJ:108:ARG:HA	25:CJ:113:VAL:HG11	1.97	0.46
30:CP:272:LYS:HA	30:CP:275:LYS:HE2	1.98	0.46
32:CS:310:ILE:HB	32:CS:369:ILE:HG13	1.97	0.46
45:Cm:47:ILE:HD11	45:Cm:63:VAL:HG11	1.97	0.46
50:C1:464:G:H2'	59:CY:369:VAL:HG21	1.97	0.46
2:UB:545:TRP:HB3	2:UB:548:THR:HB	1.98	0.46
7:UJ:1614:LEU:HD13	7:UJ:1617:ILE:H	1.81	0.46
12:UO:475:GLU:OE2	12:UO:516:SER:OG	2.32	0.46
20:CD:217:ARG:HH11	20:CD:244:SER:HB3	1.81	0.46
29:CO:73:HIS:HB3	29:CO:76:ILE:HG12	1.97	0.46
32:CS:275:LYS:HD3	32:CS:307:TYR:HE1	1.81	0.46
37:Cd:195:ALA:HA	37:Cd:198:ARG:HG2	1.97	0.46
50:C1:1462:G:H22	50:C1:1536:A:H2	1.64	0.46
53:UT:86:ILE:O	53:UT:90:THR:N	2.41	0.46
59:CY:49:LEU:HD11	60:CZ:373:VAL:HG12	1.97	0.46
55:UI:161:LEU:HD23	55:UI:192:LEU:HB3	1.98	0.46
7:UJ:1359:CYS:HB3	7:UJ:1400:TYR:CE1	2.52	0.46
7:UJ:1524:SER:HB2	7:UJ:1583:TRP:CD2	2.51	0.46
10:UM:689:LEU:HB3	10:UM:720:TRP:CH2	2.51	0.46
13:UQ:700:LEU:O	13:UQ:715:ILE:HG12	2.16	0.46
14:UR:286:TYR:HB2	14:UR:288:ILE:HG12	1.98	0.46
14:UR:605:GLY:HA2	14:UR:610:ARG:O	2.16	0.46
29:CN:132:ARG:HB2	29:CO:88:ARG:HH12	1.81	0.46
32:CS:566:GLU:OE2	32:CS:715:ARG:NH2	2.49	0.46
32:CS:914:LYS:O	32:CS:918:LYS:HG3	2.16	0.46
34:Ca:144:LYS:HD3	34:Ca:208:GLN:HA	1.97	0.46
38:Ce:30:LEU:HA	38:Ce:33:LEU:HD12	1.98	0.46
38:Ce:134:ALA:HA	38:Ce:137:THR:HG22	1.97	0.46
1:UA:199:VAL:N	1:UA:213:VAL:O	2.49	0.45
1:UA:339:HIS:CE1	1:UA:365:LYS:HD2	2.51	0.45
3:UC:473:ARG:HD2	29:CO:182:PHE:HB3	1.99	0.45
4:UD:650:VAL:HA	4:UD:655:GLN:O	2.16	0.45
5:UF:99:ALA:HB1	5:UF:109:LEU:HD21	1.97	0.45
7:UJ:17:ARG:O	7:UJ:126:ARG:NH2	2.49	0.45
9:UL:302:VAL:HG22	9:UL:369:VAL:HG11	1.97	0.45
21:CF:90:ARG:NH2	22:CG:397:SER:OG	2.50	0.45
24:CI:514:GLU:HA	24:CI:517:VAL:HG22	1.97	0.45
32:CS:224:ASP:OD1	32:CS:224:ASP:N	2.49	0.45
32:CS:803:LEU:HD22	32:CS:882:ALA:HB2	1.96	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:Ch:147:SER:HA	41:Ch:150:VAL:HG22	1.98	0.45
53:UT:750:VAL:HA	53:UT:753:MET:HG3	1.98	0.45
1:UA:847:GLN:HE21	15:UU:1007:MET:HE1	1.82	0.45
4:UD:766:THR:HG23	4:UD:767:LYS:HG3	1.98	0.45
7:UJ:492:PHE:HD1	7:UJ:533:ARG:HD2	1.80	0.45
7:UJ:988:GLY:HA3	7:UJ:1022:VAL:HG13	1.97	0.45
10:UM:777:VAL:HG21	10:UM:794:VAL:HG21	1.98	0.45
12:UO:338:MET:HE3	12:UO:342:VAL:HB	1.97	0.45
32:CS:385:LEU:HD13	32:CS:407:LEU:HD23	1.98	0.45
32:CS:593:LYS:HG3	32:CS:631:SER:HB2	1.98	0.45
44:Ck:127:MET:HG3	44:Ck:148:LEU:HD13	1.97	0.45
50:C1:923:C:H2'	50:C1:924:A:C8	2.51	0.45
52:CW:183:GLN:O	52:CW:229:TYR:OH	2.29	0.45
2:UB:672:ARG:HB3	2:UB:690:ARG:HH22	1.81	0.45
4:UD:58:PRO:HB3	4:UD:337:MET:HE1	1.99	0.45
7:UJ:700:HIS:HA	7:UJ:701:SER:HA	1.71	0.45
7:UJ:1534:ARG:HD2	7:UJ:1599:ARG:HG3	1.98	0.45
12:UO:554:VAL:HA	55:UE:230:VAL:HB	1.98	0.45
17:UZ:284:LYS:NZ	17:UZ:288:THR:O	2.48	0.45
18:CA:165:THR:O	18:CA:168:SER:OG	2.31	0.45
24:CI:71:VAL:HG22	24:CI:135:ILE:HB	1.98	0.45
25:CJ:85:MET:HE1	27:CL:630:LEU:HD22	1.98	0.45
29:CO:47:GLU:HG2	29:CO:118:LYS:HE2	1.99	0.45
32:CR:544:TYR:CE1	32:CR:637:ARG:HD2	2.51	0.45
32:CS:520:HIS:HD2	32:CS:568:PHE:HE2	1.63	0.45
35:Cb:58:TYR:CE1	35:Cb:62:LYS:HE3	2.51	0.45
36:Cc:38:ILE:HD11	36:Cc:115:ASN:HD22	1.82	0.45
39:Cf:23:LYS:HZ1	39:Cf:25:ARG:HH22	1.64	0.45
53:UT:1302:ILE:HG21	53:UT:1338:LEU:HD23	1.97	0.45
58:CX:343:LYS:O	58:CX:347:ASP:HB2	2.16	0.45
2:UB:741:HIS:CD2	2:UB:742:LYS:HG2	2.52	0.45
4:UD:561:LEU:O	4:UD:572:THR:HA	2.16	0.45
4:UD:829:THR:HG22	4:UD:831:GLN:H	1.81	0.45
13:UQ:578:LYS:HA	13:UQ:581:ARG:HG3	1.96	0.45
23:CH:305:VAL:HG12	23:CH:308:ASP:H	1.81	0.45
23:CH:328:MET:HE2	23:CH:330:ALA:HB3	1.97	0.45
32:CR:544:TYR:CZ	32:CR:637:ARG:HD2	2.51	0.45
32:CS:14:LEU:HD13	32:CS:200:LEU:HD21	1.98	0.45
36:Cc:40:ILE:HG22	36:Cc:42:ASP:H	1.82	0.45
39:Cf:11:ARG:HB2	50:C1:907:A:H5''	1.97	0.45
42:CI:96:ILE:HD11	42:CI:115:LEU:HD11	1.97	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:C1:954:A:N3	59:CY:320:ARG:NH1	2.61	0.45
52:CW:252:TYR:CZ	52:CW:259:LEU:HD13	2.52	0.45
53:UT:131:HIS:HD2	53:UT:174:TYR:CD1	2.34	0.45
53:UT:282:MET:HB2	53:UT:337:LEU:HD21	1.99	0.45
53:UT:1645:VAL:HA	53:UT:1648:LEU:HD12	1.98	0.45
56:US:319:LEU:HD11	56:US:360:PHE:HB2	1.99	0.45
58:CX:442:HIS:H	58:CX:446:ALA:HB2	1.82	0.45
60:CZ:412:GLU:HA	60:CZ:415:MET:HG3	1.98	0.45
1:UA:23:SER:HB3	1:UA:28:HIS:HB2	1.97	0.45
2:UB:10:LYS:HG3	26:CK:245:VAL:HG11	1.97	0.45
4:UD:221:ARG:HH12	14:UR:454:ILE:HG13	1.82	0.45
4:UD:554:PHE:CE1	4:UD:561:LEU:HD13	2.51	0.45
7:UJ:1651:LEU:HD22	7:UJ:1702:VAL:HG23	1.98	0.45
9:UL:284:VAL:HA	9:UL:294:ALA:O	2.17	0.45
13:UQ:89:MET:HA	13:UQ:107:TYR:HA	1.99	0.45
18:CA:173:ILE:O	33:CT:91:TYR:OH	2.34	0.45
19:CC:409:GLN:O	19:CC:413:GLN:HG3	2.17	0.45
23:CH:68:VAL:HG22	23:CH:75:ILE:HG22	1.99	0.45
32:CS:837:ASP:HB3	32:CS:857:LEU:HD21	1.99	0.45
53:UT:82:PHE:CE2	53:UT:86:ILE:HD13	2.51	0.45
60:CZ:560:ASP:OD1	60:CZ:562:ARG:NH2	2.50	0.45
7:UJ:1680:VAL:HG22	7:UJ:1729:HIS:CE1	2.51	0.45
12:UO:44:ILE:HA	12:UO:77:ALA:HB2	1.98	0.45
13:UQ:703:ALA:HB2	13:UQ:712:VAL:HG22	1.98	0.45
15:UU:576:ARG:HA	15:UU:576:ARG:HD3	1.74	0.45
24:CI:523:MET:HE1	32:CS:366:ARG:HH12	1.81	0.45
31:CQ:89:PRO:HA	31:CQ:92:MET:HE1	1.99	0.45
32:CS:358:ARG:HH11	32:CS:370:GLN:HB2	1.82	0.45
47:Co:338:LEU:HD11	47:Co:378:MET:HE2	1.97	0.45
50:C1:801:A:H1'	53:UT:1322:PRO:HG2	1.99	0.45
50:C1:1613:C:H4'	50:C1:1614:U:H5'	1.98	0.45
53:UT:1919:ILE:HA	53:UT:1922:VAL:HG12	1.98	0.45
54:UH:478:LYS:HA	54:UH:481:GLN:HG3	1.97	0.45
4:UD:381:ARG:NH2	4:UD:398:ASN:O	2.49	0.45
4:UD:440:GLY:O	4:UD:456:LEU:O	2.34	0.45
4:UD:452:LYS:HD3	55:UE:309:GLU:OE2	2.17	0.45
7:UJ:1481:LEU:HB3	7:UJ:1485:TRP:HZ3	1.80	0.45
10:UM:540:ARG:NH2	10:UM:576:LEU:HB3	2.32	0.45
13:UQ:600:THR:HG21	13:UQ:661:TRP:HB2	1.98	0.45
15:UU:941:ILE:HG21	15:UU:981:ARG:HD2	1.97	0.45
19:CC:217:ILE:HG22	19:CC:221:LYS:HZ1	1.81	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:CS:870:LEU:HB3	32:CS:874:VAL:HG12	1.98	0.45
38:Ce:177:ASP:OD1	38:Ce:177:ASP:N	2.48	0.45
39:Cf:8:ARG:NH2	39:Cf:28:GLU:OE2	2.48	0.45
39:Cf:99:SER:CA	39:Cf:173:ILE:O	2.65	0.45
44:Ck:43:VAL:HG21	44:Ck:145:LEU:HD11	1.99	0.45
50:C1:2175:A:H2'	50:C1:2176:A:C8	2.51	0.45
52:CW:280:LEU:HD12	52:CW:282:LYS:HD3	1.99	0.45
53:UT:1153:TRP:O	53:UT:1156:TYR:N	2.47	0.45
53:UT:1727:LEU:HA	53:UT:1730:GLU:HG2	1.99	0.45
4:UD:697:GLN:O	4:UD:712:LEU:HB2	2.17	0.45
7:UJ:1052:THR:O	7:UJ:1056:VAL:HB	2.17	0.45
8:UK:266:ARG:HH12	50:C1:205:C:N4	2.14	0.45
12:UO:75:VAL:HG11	12:UO:343:LEU:HD22	1.99	0.45
15:UU:249:SER:HA	15:UU:275:PRO:HB3	1.99	0.45
20:CD:428:MET:HE3	50:C1:251:G:H1'	1.99	0.45
23:CH:34:SER:HA	23:CH:74:THR:HG22	1.98	0.45
32:CS:576:GLU:HA	60:CZ:297:ALA:HB1	1.98	0.45
37:Cd:153:VAL:HA	37:Cd:156:TYR:HB2	1.98	0.45
53:UT:536:ARG:HH12	53:UT:825:MET:HE1	1.81	0.45
53:UT:1200:LEU:HD22	53:UT:1206:ILE:HG21	1.99	0.45
53:UT:1368:ARG:HA	53:UT:1371:LEU:HD12	1.98	0.45
54:UH:429:LEU:H	54:UH:429:LEU:HG	1.70	0.45
58:CX:425:ILE:O	58:CX:430:ARG:NH1	2.49	0.45
59:CY:301:SER:HB2	59:CY:303:ARG:HH11	1.82	0.45
7:UJ:1507:LEU:HD11	7:UJ:1560:ASP:HB3	1.97	0.45
7:UJ:1528:SER:HB3	7:UJ:1583:TRP:HZ2	1.82	0.45
9:UL:393:LEU:HD13	9:UL:395:GLU:HG3	1.98	0.45
9:UL:510:ALA:O	9:UL:528:ALA:N	2.38	0.45
13:UQ:572:THR:HG23	13:UQ:575:ASP:H	1.82	0.45
19:CC:46:LYS:NZ	50:C1:439:A:OP1	2.40	0.45
20:CD:261:ALA:HA	20:CD:264:VAL:HG12	1.98	0.45
23:CH:224:CYS:HB3	23:CH:227:VAL:HG23	1.97	0.45
24:CI:1028:PRO:HG2	50:C1:1161:G:H5''	1.99	0.45
26:CK:112:PRO:HG2	26:CK:189:PRO:HD3	1.98	0.45
30:CP:205:ARG:HD3	30:CP:205:ARG:HA	1.78	0.45
32:CS:517:GLU:N	32:CS:517:GLU:OE2	2.50	0.45
36:Cc:44:SER:HA	48:Cp:54:ILE:HB	1.98	0.45
44:Ck:135:PRO:HA	44:Ck:141:ARG:HG3	1.99	0.45
53:UT:969:PHE:HZ	53:UT:1023:ILE:HD11	1.81	0.45
53:UT:1180:VAL:HG23	53:UT:1185:ARG:HH22	1.82	0.45
53:UT:1569:SER:HA	53:UT:1572:ILE:HD12	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:UT:1632:ASP:HB3	53:UT:1633:TRP:CE3	2.52	0.45
54:UH:842:TYR:HB2	54:UH:871:LEU:HD13	1.98	0.45
1:UA:2:LYS:NZ	15:UU:676:GLY:O	2.44	0.45
1:UA:486:GLY:HA3	1:UA:513:VAL:HG11	1.99	0.45
2:UB:481:CYS:HB2	2:UB:511:HIS:CD2	2.52	0.45
4:UD:564:ALA:HB1	4:UD:630:PRO:HG2	1.99	0.45
9:UL:432:VAL:HA	9:UL:442:ALA:O	2.17	0.45
10:UM:452:SER:OG	10:UM:453:LYS:N	2.49	0.45
17:UZ:120:LEU:HD21	17:UZ:221:VAL:HG13	1.99	0.45
19:CC:236:SER:OG	19:CC:239:ASP:OD1	2.23	0.45
23:CH:158:LEU:HA	23:CH:161:TYR:HD2	1.82	0.45
23:CH:377:ILE:HG21	24:CI:542:LEU:HD23	1.98	0.45
24:CI:72:VAL:HG11	24:CI:129:MET:HB3	1.98	0.45
50:C1:495:G:OP2	50:C1:495:G:N2	2.38	0.45
52:CW:156:VAL:HA	52:CW:203:ALA:HA	1.99	0.45
57:Cl:49:LYS:HD3	57:Cl:49:LYS:HA	1.72	0.45
1:UA:216:ASP:OD1	1:UA:216:ASP:N	2.50	0.44
2:UB:681:PRO:HB2	2:UB:683:HIS:HE2	1.82	0.44
4:UD:802:ARG:HA	4:UD:805:GLU:HG2	1.98	0.44
8:UK:253:SER:HB3	8:UK:265:VAL:H	1.80	0.44
9:UL:626:SER:OG	9:UL:627:ALA:N	2.50	0.44
10:UM:165:ALA:C	10:UM:195:ARG:HH22	2.25	0.44
10:UM:383:LEU:HD11	10:UM:464:PRO:HG3	1.99	0.44
13:UQ:803:LEU:HD23	13:UQ:830:VAL:HG11	1.98	0.44
14:UR:367:GLN:O	14:UR:370:GLN:C	2.60	0.44
15:UU:665:MET:HG3	15:UU:666:THR:HG22	1.98	0.44
30:CP:129:MET:HE1	30:CP:186:GLU:HA	1.97	0.44
31:CQ:171:ILE:HG23	31:CQ:236:VAL:HG21	1.99	0.44
32:CS:291:LYS:NZ	32:CS:412:SER:O	2.50	0.44
32:CS:926:LEU:HD23	32:CS:926:LEU:HA	1.83	0.44
35:Cb:122:LYS:HE2	35:Cb:145:ARG:NH2	2.33	0.44
39:Cf:65:PHE:HD2	39:Cf:104:ILE:HD13	1.82	0.44
58:CX:430:ARG:HH12	58:CX:458:GLY:HA2	1.82	0.44
60:CZ:403:ILE:O	60:CZ:407:MET:HG3	2.18	0.44
60:CZ:575:THR:HG22	60:CZ:579:GLN:HB2	1.97	0.44
2:UB:553:SER:HA	2:UB:556:VAL:HG22	1.99	0.44
4:UD:5:ARG:HH12	54:UH:904:ARG:HH11	1.64	0.44
4:UD:640:ARG:HH12	4:UD:660:ASN:ND2	2.15	0.44
7:UJ:1351:ALA:HB2	7:UJ:1378:LEU:HD23	1.98	0.44
8:UK:162:ILE:HD13	61:UP:321:ARG:HH21	1.83	0.44
9:UL:680:TYR:O	9:UL:689:ILE:N	2.47	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:UU:71:LEU:HD11	15:UU:106:ALA:HB2	1.98	0.44
18:CB:184:GLU:O	18:CB:207:VAL:HA	2.18	0.44
19:CC:181:ILE:HG13	19:CC:184:LEU:HD23	1.99	0.44
20:CD:293:ILE:HG21	20:CD:369:ILE:HD11	1.98	0.44
24:CI:772:ARG:HE	24:CI:775:LYS:HE2	1.81	0.44
24:CI:915:VAL:HG21	24:CI:992:TRP:HB3	2.00	0.44
27:CL:705:LYS:HA	27:CL:708:MET:HE3	1.98	0.44
30:CP:196:TYR:O	30:CP:200:GLU:HG2	2.17	0.44
32:CS:916:MET:HA	32:CS:919:VAL:HG22	2.00	0.44
34:Ca:134:LEU:HG	34:Ca:218:LEU:HD12	1.99	0.44
35:Cb:125:LYS:HB3	35:Cb:142:HIS:HD2	1.80	0.44
38:Ce:184:ARG:HH22	38:Ce:185:ARG:HE	1.65	0.44
44:Ck:85:MET:HG3	44:Ck:88:THR:HB	1.99	0.44
50:C1:1013:G:H2'	50:C1:1014:G:H8	1.82	0.44
52:CW:119:ARG:NH1	52:CW:135:ILE:O	2.49	0.44
53:UT:1037:ASP:O	53:UT:1040:LEU:C	2.61	0.44
53:UT:2043:SER:OG	53:UT:2045:SER:O	2.35	0.44
59:CY:103:LEU:HA	59:CY:106:LYS:HG2	1.99	0.44
1:UA:546:SER:OG	1:UA:547:GLY:N	2.50	0.44
1:UA:724:LEU:HD22	1:UA:749:VAL:HG22	1.99	0.44
4:UD:356:ALA:HB1	4:UD:359:LYS:HB2	1.99	0.44
7:UJ:813:ILE:HA	7:UJ:816:MET:HG3	1.99	0.44
7:UJ:1645:ASN:OD1	7:UJ:1646:LEU:N	2.50	0.44
9:UL:613:MET:HE3	9:UL:613:MET:HB2	1.76	0.44
9:UL:800:GLU:HA	9:UL:803:ARG:HG2	1.99	0.44
13:UQ:146:SER:HA	13:UQ:157:TRP:O	2.16	0.44
18:CB:150:MET:HE2	18:CB:156:VAL:HG11	1.99	0.44
24:CI:299:ILE:HG12	24:CI:779:LEU:HD22	1.98	0.44
32:CR:24:ARG:NH2	32:CR:140:ILE:O	2.50	0.44
32:CS:181:VAL:HG22	32:CS:563:PRO:HB3	1.98	0.44
34:Ca:82:ARG:NH2	34:Ca:188:LEU:O	2.50	0.44
37:Cd:192:HIS:O	37:Cd:196:LEU:HD12	2.17	0.44
53:UT:1284:SER:O	53:UT:1288:THR:HG23	2.17	0.44
53:UT:1645:VAL:HG11	53:UT:1719:LEU:HD22	1.99	0.44
3:UC:239:LEU:HD23	3:UC:242:LEU:HD12	1.98	0.44
9:UL:573:PHE:CE1	9:UL:580:LEU:HD13	2.52	0.44
10:UM:21:TYR:HB2	10:UM:37:SER:HB2	1.98	0.44
10:UM:238:ILE:HA	10:UM:248:LEU:O	2.17	0.44
13:UQ:181:THR:O	13:UQ:229:LYS:NZ	2.46	0.44
13:UQ:356:ARG:HD2	13:UQ:526:ILE:HD12	1.99	0.44
18:CA:180:VAL:O	18:CA:203:VAL:HA	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:CI:87:SER:HB3	24:CI:219:ILE:HG13	1.98	0.44
24:CI:148:MET:HE3	24:CI:148:MET:HB3	1.75	0.44
24:CI:858:ARG:NH2	50:C1:1157:C:O3'	2.51	0.44
26:CK:162:THR:OG1	26:CK:271:GLY:O	2.29	0.44
32:CS:484:ASP:O	32:CS:487:GLU:HG3	2.18	0.44
35:Cb:19:LEU:HB2	35:Cb:51:ARG:NH2	2.31	0.44
50:C1:745:U:H2'	50:C1:746:A:H8	1.83	0.44
53:UT:1377:VAL:HA	53:UT:1380:ARG:HG2	1.97	0.44
53:UT:1600:ALA:O	53:UT:1603:THR:OG1	2.26	0.44
53:UT:1617:ARG:HG2	53:UT:1690:PHE:CZ	2.53	0.44
53:UT:1883:LEU:O	53:UT:1887:ARG:HG3	2.17	0.44
54:UH:755:TYR:OH	55:UI:204:MET:SD	2.61	0.44
5:UF:145:THR:O	5:UF:149:ARG:HG3	2.16	0.44
5:UF:165:LEU:HD13	11:UN:370:GLU:HG2	2.00	0.44
7:UJ:919:LEU:HB3	7:UJ:961:LEU:HB3	2.00	0.44
7:UJ:989:ASP:OD1	7:UJ:990:VAL:N	2.50	0.44
7:UJ:1024:GLN:HA	7:UJ:1027:MET:HE2	1.98	0.44
7:UJ:1622:ALA:O	7:UJ:1626:VAL:HG13	2.17	0.44
10:UM:85:MET:HE1	10:UM:128:THR:HG21	1.98	0.44
12:UO:540:ALA:HA	55:UE:246:LEU:HD12	2.00	0.44
15:UU:858:ASP:OD1	15:UU:859:ILE:N	2.50	0.44
22:CG:176:VAL:HG23	22:CG:185:THR:HG22	1.99	0.44
24:CI:954:THR:O	24:CI:957:GLY:N	2.38	0.44
24:CI:974:ARG:NH1	50:C1:2183:A:OP2	2.50	0.44
37:Cd:76:LEU:O	52:CW:49:GLN:NE2	2.50	0.44
40:Cg:123:ALA:O	40:Cg:127:ILE:HG13	2.17	0.44
42:Ci:81:ALA:HB2	42:Ci:118:LEU:HD23	1.99	0.44
44:Ck:72:ARG:HH22	50:C1:830:G:H2'	1.83	0.44
50:C1:81:G:H1	50:C1:126:C:H42	1.66	0.44
50:C1:686:A:H2'	50:C1:687:U:H4'	1.99	0.44
53:UT:11:LYS:HG2	53:UT:798:ASN:HB3	2.00	0.44
53:UT:736:GLY:O	53:UT:739:THR:OG1	2.29	0.44
53:UT:1017:HIS:HA	53:UT:1020:ARG:HH21	1.83	0.44
53:UT:2085:ASP:HA	53:UT:2088:GLU:HB3	1.98	0.44
56:US:430:LYS:HA	56:US:433:LYS:HG3	1.99	0.44
1:UA:343:MET:HE3	1:UA:357:THR:HG21	1.99	0.44
4:UD:487:SER:HA	4:UD:554:PHE:CD2	2.53	0.44
7:UJ:704:LEU:HB3	7:UJ:708:LYS:NZ	2.32	0.44
9:UL:601:LEU:HD22	9:UL:639:GLY:HA3	1.98	0.44
14:UR:322:ARG:HH22	50:C1:133:G:H22	1.64	0.44
19:CC:287:TYR:CZ	19:CC:291:LEU:HD22	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CD:341:TYR:HB3	20:CD:345:TYR:HB2	1.99	0.44
22:CG:398:MET:HA	22:CG:413:SER:HA	1.99	0.44
29:CO:111:GLN:NE2	29:CO:123:GLU:OE2	2.51	0.44
32:CR:785:ARG:HH12	32:CS:840:ARG:NH2	2.14	0.44
32:CR:803:LEU:HD11	32:CR:882:ALA:HB2	2.00	0.44
32:CS:388:ILE:HB	32:CS:410:MET:HG2	1.99	0.44
50:C1:467:C:H4'	50:C1:468:C:H5'	1.99	0.44
50:C1:1239:G:H2'	50:C1:1240:G:H8	1.82	0.44
53:UT:349:ARG:HA	53:UT:349:ARG:HD3	1.84	0.44
53:UT:931:ALA:HB2	53:UT:997:HIS:HD2	1.83	0.44
53:UT:1168:ARG:HA	53:UT:1168:ARG:HD3	1.75	0.44
57:CI:24:GLY:HA2	57:CI:58:ALA:HB3	2.00	0.44
6:UG:337:ASN:O	6:UG:380:LYS:NZ	2.48	0.44
7:UJ:109:LEU:HD11	7:UJ:138:THR:HG22	1.99	0.44
7:UJ:330:LYS:HA	7:UJ:333:ILE:HD12	1.99	0.44
7:UJ:721:ALA:O	7:UJ:725:ARG:HG3	2.17	0.44
24:CI:1077:GLN:NE2	50:C1:366:G:OP1	2.41	0.44
32:CR:32:ASP:O	32:CR:154:LYS:NZ	2.50	0.44
32:CR:855:LEU:HA	32:CR:858:MET:HG2	2.00	0.44
32:CR:914:LYS:O	32:CR:918:LYS:HG3	2.18	0.44
32:CS:795:ARG:HA	32:CS:890:GLN:OE1	2.18	0.44
32:CS:883:ILE:HD12	32:CS:911:ILE:HG21	2.00	0.44
37:Cd:20:ASP:OD2	37:Cd:22:ARG:NH1	2.51	0.44
49:CU:189:THR:HG23	49:CU:191:THR:H	1.82	0.44
50:C1:782:G:H2'	50:C1:783:G:C8	2.53	0.44
50:C1:907:A:O2'	50:C1:930:G:N2	2.50	0.44
52:CW:343:GLY:HA2	52:CW:362:LEU:HD22	2.00	0.44
53:UT:306:ILE:HD11	53:UT:341:VAL:HG22	2.00	0.44
53:UT:659:LEU:HA	53:UT:667:ARG:HG3	1.99	0.44
53:UT:1310:THR:HB	53:UT:1351:VAL:HG12	2.00	0.44
55:UI:190:SER:HB2	55:UI:228:ALA:HB2	1.99	0.44
2:UB:116:ILE:HG13	23:CH:58:GLU:HG3	2.00	0.44
4:UD:48:ARG:NE	4:UD:54:GLU:OE2	2.48	0.44
4:UD:122:LYS:HG2	4:UD:123:LYS:HG3	1.98	0.44
7:UJ:810:PHE:HA	7:UJ:813:ILE:HG12	2.00	0.44
9:UL:449:LEU:HD12	9:UL:482:VAL:HG21	2.00	0.44
13:UQ:751:LEU:HD21	13:UQ:791:LEU:HD12	1.99	0.44
13:UQ:827:PHE:HD2	13:UQ:831:ILE:HD11	1.83	0.44
15:UU:692:VAL:HG12	15:UU:699:THR:HA	2.00	0.44
22:CG:106:ARG:HH22	59:CY:329:SER:N	2.15	0.44
22:CG:408:MET:HE2	22:CG:420:LEU:HD11	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:CG:420:LEU:O	22:CG:429:LEU:N	2.51	0.44
25:CJ:159:THR:OG1	25:CJ:160:TRP:N	2.49	0.44
29:CN:135:LYS:HE3	29:CN:135:LYS:HB3	1.85	0.44
30:CP:278:ALA:O	30:CP:282:GLU:HG2	2.17	0.44
32:CR:620:GLN:OE1	37:Cd:25:ARG:NH2	2.50	0.44
32:CS:190:LEU:HA	32:CS:193:LEU:HG	1.99	0.44
34:Ca:219:LYS:HA	34:Ca:219:LYS:HD3	1.77	0.44
35:Cb:128:ARG:O	35:Cb:139:LEU:HA	2.18	0.44
37:Cd:137:ARG:NH2	50:C1:728:G:O6	2.51	0.44
38:Ce:73:LEU:HG	38:Ce:100:ALA:HB2	2.00	0.44
40:Cg:146:VAL:HG11	40:Cg:154:ILE:HD11	2.00	0.44
53:UT:282:MET:HE1	53:UT:325:VAL:HG23	1.99	0.44
53:UT:1997:VAL:HG22	53:UT:2035:GLU:HG2	2.00	0.44
53:UT:2132:ARG:HE	53:UT:2174:SER:HB3	1.81	0.44
56:US:91:LEU:HD11	56:US:114:LEU:HD13	2.00	0.44
56:US:496:SER:H	56:US:499:SER:HB2	1.82	0.44
3:UC:219:TYR:HA	27:CL:60:ARG:HB2	1.99	0.44
6:UG:326:ILE:HD11	6:UG:370:LEU:HD13	1.99	0.44
7:UJ:102:LEU:HA	7:UJ:105:VAL:HG12	2.00	0.44
7:UJ:129:GLU:HG2	7:UJ:156:PRO:HG2	1.99	0.44
9:UL:239:GLY:HA2	9:UL:275:ARG:HE	1.82	0.44
9:UL:492:TYR:HD1	9:UL:499:LEU:HA	1.83	0.44
9:UL:913:GLN:O	9:UL:917:MET:HG3	2.17	0.44
12:UO:463:ARG:HH21	13:UQ:523:ASP:HB3	1.83	0.44
12:UO:478:VAL:HG13	12:UO:505:LEU:HD12	1.99	0.44
16:UX:-8:GLY:N	50:C1:254:G:O6	2.51	0.44
18:CA:107:LYS:HB2	18:CA:129:ILE:HD12	2.00	0.44
18:CA:309:LYS:HE3	18:CA:309:LYS:HB3	1.82	0.44
24:CI:248:ASN:HB3	24:CI:271:SER:HB2	1.99	0.44
29:CO:121:LEU:HD22	29:CO:163:ILE:HB	2.00	0.44
32:CR:795:ARG:HA	32:CR:890:GLN:HG3	1.99	0.44
32:CR:845:ALA:HB1	32:CR:917:ARG:HE	1.83	0.44
35:Cb:63:ALA:O	35:Cb:67:GLN:HG2	2.18	0.44
50:C1:1503:U:H2'	50:C1:1504:A:C8	2.53	0.44
50:C1:2368:U:H2'	50:C1:2369:G:C8	2.53	0.44
53:UT:10:LEU:H	53:UT:205:ARG:NH2	2.16	0.44
53:UT:804:LEU:O	53:UT:808:THR:HG23	2.18	0.44
58:CX:266:MET:O	58:CX:270:ILE:HB	2.18	0.44
3:UC:235:GLU:OE1	3:UC:269:TYR:OH	2.26	0.43
4:UD:65:GLN:HB3	4:UD:370:GLN:HB2	2.00	0.43
4:UD:413:LEU:HD12	54:UH:907:TYR:CE2	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:UJ:1429:ILE:N	7:UJ:1430:PRO:HD2	2.32	0.43
9:UL:42:ALA:HB1	9:UL:70:VAL:HB	2.00	0.43
9:UL:570:SER:HB3	9:UL:583:ALA:HB3	2.00	0.43
12:UO:70:ASN:C	12:UO:70:ASN:ND2	2.76	0.43
20:CD:287:PRO:HB2	20:CD:391:ALA:HB2	1.99	0.43
22:CG:413:SER:O	22:CG:416:GLY:N	2.51	0.43
29:CO:122:ILE:HG12	29:CO:162:VAL:HG12	2.00	0.43
32:CR:65:LEU:HD22	32:CR:154:LYS:HE3	2.00	0.43
32:CR:126:GLN:HA	32:CR:152:LEU:HD12	1.99	0.43
32:CR:877:SER:H	32:CR:880:GLN:HB2	1.82	0.43
32:CS:885:LEU:HD23	32:CS:890:GLN:HG2	2.00	0.43
35:Cb:85:GLY:N	35:Cb:88:ASP:OD2	2.39	0.43
37:Cd:211:TYR:HA	37:Cd:214:ILE:HG22	1.99	0.43
44:Ck:68:MET:HE1	50:C1:833:U:C4	2.53	0.43
46:Cn:74:VAL:HG11	46:Cn:104:LEU:HD11	2.00	0.43
53:UT:977:PHE:HZ	53:UT:995:LEU:HD21	1.82	0.43
53:UT:1183:THR:O	53:UT:1187:MET:HG3	2.18	0.43
53:UT:1938:LEU:HD21	53:UT:1942:ILE:HD11	2.00	0.43
54:UH:877:ILE:HD12	54:UH:899:PHE:HD2	1.83	0.43
56:US:198:PHE:HE2	56:US:264:GLN:HG3	1.83	0.43
59:CY:81:LEU:HD22	60:CZ:404:TRP:CD2	2.53	0.43
2:UB:615:MET:HE3	2:UB:615:MET:O	2.18	0.43
7:UJ:1459:ALA:HA	7:UJ:1462:MET:HE2	1.98	0.43
8:UK:218:LYS:NZ	50:C1:378:C:OP2	2.41	0.43
9:UL:17:VAL:HG22	9:UL:394:LEU:HD13	2.00	0.43
10:UM:310:THR:HA	10:UM:361:ILE:H	1.82	0.43
10:UM:432:HIS:CE1	10:UM:458:ARG:HD2	2.53	0.43
18:CB:94:THR:O	18:CB:127:TYR:HA	2.19	0.43
24:CI:90:ARG:HH22	32:CR:91:GLN:HB2	1.83	0.43
29:CO:116:THR:HG23	29:CO:119:GLY:H	1.82	0.43
32:CR:255:LEU:HD11	32:CR:330:GLY:HA2	1.99	0.43
32:CS:282:THR:OG1	32:CS:471:GLU:OE1	2.28	0.43
32:CS:310:ILE:HG12	32:CS:385:LEU:HD23	2.00	0.43
32:CS:532:VAL:HG13	32:CS:579:LEU:HD21	2.00	0.43
39:Cf:98:LYS:HB3	50:C1:913:G:H5''	2.01	0.43
50:C1:346:C:O2'	50:C1:347:C:O5'	2.35	0.43
50:C1:2120:C:H1'	50:C1:2155:G:H22	1.83	0.43
53:UT:872:PHE:HE2	53:UT:929:LEU:HD11	1.83	0.43
53:UT:1029:VAL:HA	53:UT:1032:MET:HG2	2.00	0.43
53:UT:1206:ILE:O	53:UT:1210:ILE:HG12	2.18	0.43
53:UT:1358:LEU:HD22	53:UT:1362:PHE:CZ	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:UT:2047:GLN:NE2	53:UT:2085:ASP:OD1	2.48	0.43
54:UH:739:LEU:O	54:UH:743:ARG:HG3	2.18	0.43
54:UH:862:HIS:CE1	54:UH:864:SER:HB3	2.53	0.43
59:CY:29:GLN:OE1	60:CZ:372:SER:OG	2.35	0.43
59:CY:56:VAL:HG21	60:CZ:370:ILE:HD12	2.01	0.43
60:CZ:367:TRP:HE1	60:CZ:394:ILE:HD12	1.83	0.43
2:UB:804:ARG:NH2	29:CO:184:ALA:O	2.52	0.43
7:UJ:1411:ASP:HB3	7:UJ:1414:LEU:HB3	1.99	0.43
7:UJ:1438:LEU:HA	7:UJ:1441:LEU:HG	2.00	0.43
7:UJ:1718:HIS:HA	7:UJ:1721:GLU:HG2	2.00	0.43
10:UM:638:PHE:HE1	10:UM:683:GLY:HA2	1.82	0.43
11:UN:276:MET:HE1	53:UT:2237:PHE:HB3	2.01	0.43
13:UQ:636:ARG:HH12	55:UE:41:LEU:HB2	1.83	0.43
22:CG:297:ARG:CZ	22:CG:342:GLU:HB2	2.49	0.43
22:CG:347:VAL:HG23	22:CG:398:MET:HE3	1.99	0.43
22:CG:352:ARG:NH1	22:CG:396:GLY:O	2.49	0.43
25:CJ:166:ILE:O	25:CJ:170:ILE:HG13	2.18	0.43
29:CN:130:ILE:HD12	29:CN:131:PRO:HD2	1.99	0.43
37:Cd:21:GLU:O	37:Cd:25:ARG:HD3	2.18	0.43
47:Co:340:THR:HA	47:Co:356:VAL:HG12	2.00	0.43
50:C1:1480:G:H1	50:C1:1502:U:H3	1.65	0.43
53:UT:553:GLU:HA	53:UT:556:LEU:HD12	2.01	0.43
53:UT:1210:ILE:O	53:UT:1213:THR:OG1	2.26	0.43
53:UT:1720:LEU:HD23	53:UT:1723:LEU:HD13	2.00	0.43
54:UH:753:THR:HG23	55:UI:207:ARG:HH21	1.83	0.43
4:UD:432:THR:N	4:UD:446:SER:O	2.44	0.43
7:UJ:489:ASP:HA	7:UJ:492:PHE:HD2	1.83	0.43
9:UL:713:SER:O	9:UL:720:ILE:HA	2.18	0.43
15:UU:561:THR:HA	15:UU:624:ALA:HA	2.00	0.43
16:UX:64:PHE:O	16:UX:68:THR:OG1	2.20	0.43
23:CH:67:ASP:O	23:CH:75:ILE:HA	2.18	0.43
31:CQ:104:PRO:HA	31:CQ:107:ASP:HB3	2.00	0.43
32:CR:15:ILE:HG12	32:CR:148:LEU:HD21	2.00	0.43
32:CS:299:ILE:HG23	32:CS:310:ILE:HD13	1.99	0.43
35:Cb:86:PHE:CD2	35:Cb:87:MET:HG2	2.52	0.43
37:Cd:140:LYS:HA	37:Cd:143:ARG:HG2	1.99	0.43
38:Ce:62:LYS:HB2	38:Ce:94:ARG:HE	1.82	0.43
43:Cj:47:LYS:NZ	43:Cj:79:TYR:OH	2.51	0.43
49:CU:205:THR:O	49:CU:209:ARG:HG3	2.18	0.43
50:C1:176:G:H2'	50:C1:177:G:H8	1.83	0.43
50:C1:2166:A:N1	50:C1:2194:A:H5''	2.33	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:UT:717:TYR:HE1	53:UT:727:ALA:HA	1.83	0.43
53:UT:969:PHE:CZ	53:UT:1023:ILE:HD11	2.54	0.43
53:UT:1129:LEU:O	53:UT:1133:ILE:HG12	2.17	0.43
53:UT:1391:ILE:HD11	53:UT:1430:GLN:HA	2.00	0.43
53:UT:1630:LYS:HA	53:UT:1630:LYS:HD2	1.69	0.43
4:UD:774:VAL:HG11	13:UQ:342:ARG:HE	1.84	0.43
5:UF:328:PHE:HB2	5:UF:334:THR:HG21	2.00	0.43
7:UJ:174:LEU:HD13	33:CT:74:PRO:HB2	2.00	0.43
7:UJ:1255:LEU:C	7:UJ:1257:ASN:N	2.76	0.43
7:UJ:1630:VAL:HG23	7:UJ:1678:VAL:HG21	2.00	0.43
9:UL:109:HIS:NE2	9:UL:127:SER:OG	2.43	0.43
12:UO:467:ARG:NH2	12:UO:507:ASP:OD2	2.33	0.43
13:UQ:740:LEU:HD22	13:UQ:816:ILE:HD12	2.01	0.43
17:UZ:28:LYS:HB2	17:UZ:28:LYS:HE2	1.82	0.43
22:CG:253:LYS:HD3	22:CG:253:LYS:HA	1.73	0.43
22:CG:444:LEU:HD22	22:CG:453:PRO:HB2	1.99	0.43
24:CI:284:GLN:HB3	24:CI:296:ILE:HD12	2.01	0.43
24:CI:375:LEU:HD13	32:CR:159:LEU:HG	2.01	0.43
24:CI:1090:LEU:HD22	33:CT:162:VAL:HG22	2.00	0.43
36:Cc:92:GLY:O	50:C1:2192:U:O2'	2.33	0.43
41:Ch:130:LYS:NZ	41:Ch:136:PRO:O	2.32	0.43
50:C1:782:G:H2'	50:C1:783:G:H8	1.83	0.43
50:C1:1239:G:H2'	50:C1:1240:G:C8	2.54	0.43
53:UT:497:GLN:NE2	53:UT:501:LYS:HD2	2.33	0.43
53:UT:1732:LEU:HD23	53:UT:1733:PRO:HD3	2.00	0.43
53:UT:1882:ASP:O	53:UT:1885:THR:OG1	2.35	0.43
58:CX:383:ASP:HA	58:CX:386:VAL:HB	2.01	0.43
1:UA:418:ARG:HD3	1:UA:418:ARG:HA	1.85	0.43
6:UG:43:ARG:O	6:UG:47:GLN:HG3	2.18	0.43
7:UJ:77:GLN:HE21	14:UR:62:ALA:N	2.15	0.43
7:UJ:221:MET:HE1	7:UJ:254:VAL:HG11	2.01	0.43
7:UJ:505:CYS:HA	7:UJ:510:SER:HB3	2.00	0.43
7:UJ:1647:TRP:CZ2	7:UJ:1682:GLN:HB3	2.54	0.43
13:UQ:524:VAL:HG12	13:UQ:526:ILE:H	1.84	0.43
18:CB:180:VAL:HG13	18:CB:203:VAL:HG23	2.00	0.43
18:CB:240:GLY:O	18:CB:244:ARG:HG2	2.19	0.43
19:CC:100:VAL:O	19:CC:120:ALA:HA	2.17	0.43
19:CC:381:TYR:CZ	19:CC:385:LYS:HE2	2.53	0.43
20:CD:214:LEU:HB2	20:CD:225:LEU:HD21	2.00	0.43
27:CL:52:LEU:O	27:CL:55:THR:O	2.36	0.43
29:CO:77:MET:HE1	29:CO:82:ARG:HB3	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:CS:201:VAL:HG23	32:CS:209:LEU:HB2	2.00	0.43
53:UT:612:ARG:HG2	53:UT:835:ILE:HG23	1.99	0.43
53:UT:1167:PRO:HD2	53:UT:1168:ARG:HG2	2.00	0.43
53:UT:1228:LEU:HG	53:UT:1288:THR:HG21	2.01	0.43
53:UT:1312:LEU:HA	53:UT:1315:GLN:HG2	2.00	0.43
53:UT:1462:PHE:HE2	53:UT:1482:VAL:HG23	1.83	0.43
53:UT:2062:LEU:HB2	53:UT:2101:SER:HB3	2.00	0.43
54:UH:193:VAL:CG1	54:UH:197:VAL:HG21	2.48	0.43
56:US:149:GLN:HG2	56:US:153:LEU:HD22	2.01	0.43
56:US:397:ILE:HD13	56:US:463:LEU:HD22	2.01	0.43
58:CX:355:GLN:HB2	58:CX:391:ARG:HH22	1.84	0.43
6:UG:579:ASP:HA	30:CP:73:ILE:HD11	2.00	0.43
7:UJ:1501:GLN:O	7:UJ:1505:ILE:HG12	2.19	0.43
9:UL:89:ASP:OD1	9:UL:89:ASP:N	2.50	0.43
13:UQ:637:PHE:O	13:UQ:664:SER:N	2.45	0.43
14:UR:326:ARG:HG2	14:UR:342:GLY:HA2	1.99	0.43
15:UU:365:ILE:HB	15:UU:378:LEU:HD22	2.00	0.43
17:UZ:160:ILE:HA	17:UZ:163:LEU:HD23	2.00	0.43
19:CC:27:VAL:HG21	28:CM:335:THR:HG21	2.01	0.43
19:CC:387:SER:O	19:CC:391:ARG:HG3	2.18	0.43
26:CK:117:LEU:HD11	43:Cj:126:PRO:HG2	2.01	0.43
28:CM:423:ARG:NH2	28:CM:431:GLU:O	2.47	0.43
32:CR:614:ILE:HG12	32:CR:634:ARG:HD3	2.00	0.43
32:CR:785:ARG:NH1	32:CS:840:ARG:HH22	2.17	0.43
50:C1:468:C:O2'	50:C1:469:G:O4'	2.37	0.43
53:UT:462:ASN:HA	53:UT:465:LEU:HB2	2.00	0.43
53:UT:1341:LEU:H	53:UT:1381:ARG:HH22	1.67	0.43
55:UE:229:LEU:HD13	55:UE:235:LEU:HD13	1.99	0.43
58:CX:300:ALA:HB2	58:CX:337:HIS:CD2	2.53	0.43
59:CY:231:LEU:O	59:CY:235:ILE:HG12	2.19	0.43
3:UC:317:LYS:HD2	27:CL:159:LEU:HD13	2.01	0.43
6:UG:307:ALA:HB2	6:UG:348:VAL:HG13	2.01	0.43
10:UM:222:ALA:HB3	10:UM:228:LYS:HG3	1.99	0.43
10:UM:280:VAL:HA	10:UM:290:TYR:O	2.18	0.43
11:UN:908:GLU:OE1	28:CM:42:ARG:NH2	2.44	0.43
18:CB:257:ILE:HD13	18:CB:275:GLU:HG2	2.00	0.43
24:CI:288:ILE:HB	24:CI:291:VAL:HB	2.00	0.43
25:CJ:129:LYS:O	25:CJ:133:GLN:HG3	2.18	0.43
28:CM:432:LYS:NZ	50:C1:585:A:OP2	2.41	0.43
29:CO:41:LEU:HD12	29:CO:114:ILE:HG12	2.00	0.43
32:CR:199:CYS:SG	32:CR:212:SER:OG	2.77	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:CS:390:GLU:HB3	32:CS:393:ALA:HB3	2.00	0.43
35:Cb:127:LYS:HB2	35:Cb:140:VAL:HG23	2.01	0.43
43:Cj:22:CYS:HB2	43:Cj:88:SER:OG	2.19	0.43
51:C2:137:U:H3	51:C2:150:G:H1	1.67	0.43
53:UT:553:GLU:HA	53:UT:556:LEU:HB2	2.01	0.43
53:UT:710:LEU:HD21	53:UT:737:MET:HG2	2.01	0.43
54:UH:252:PHE:CE2	54:UH:272:LEU:HD12	2.54	0.43
54:UH:625:GLU:HA	54:UH:628:VAL:HG12	2.00	0.43
59:CY:56:VAL:HA	59:CY:59:ILE:HD12	1.99	0.43
59:CY:94:LEU:HD21	60:CZ:463:LEU:HD13	2.01	0.43
1:UA:705:GLN:HE22	15:UU:676:GLY:HA3	1.82	0.43
2:UB:519:ASN:O	2:UB:523:LEU:N	2.52	0.43
4:UD:678:LEU:O	4:UD:683:ARG:NH2	2.46	0.43
5:UF:331:HIS:O	5:UF:334:THR:OG1	2.29	0.43
7:UJ:1680:VAL:HG22	7:UJ:1729:HIS:HE1	1.82	0.43
15:UU:233:THR:N	15:UU:247:ALA:O	2.43	0.43
29:CN:178:VAL:HG23	29:CN:223:GLU:HG3	2.00	0.43
32:CR:388:ILE:HD13	32:CR:388:ILE:HG21	1.79	0.43
32:CS:183:ALA:HB1	32:CS:186:ASN:ND2	2.34	0.43
32:CS:361:ILE:HB	32:CS:367:GLN:HG3	2.00	0.43
32:CS:884:LEU:HD13	32:CS:915:ILE:HG21	2.00	0.43
37:Cd:149:LYS:H	37:Cd:149:LYS:HG2	1.49	0.43
39:Cf:24:LYS:HB3	50:C1:984:A:H2	1.84	0.43
45:Cm:24:GLN:HA	45:Cm:63:VAL:O	2.18	0.43
50:C1:60:A:H2'	54:UH:857:LYS:HZ2	1.84	0.43
50:C1:1644:U:O2'	50:C1:1645:U:O2	2.30	0.43
56:US:298:THR:OG1	56:US:299:LYS:N	2.52	0.43
59:CY:323:ARG:O	59:CY:327:ALA:HB3	2.18	0.43
55:UI:235:LEU:O	55:UI:239:LEU:HB2	2.18	0.43
1:UA:3:THR:HG21	1:UA:607:LEU:HD13	2.01	0.43
5:UF:336:SER:OG	5:UF:340:ARG:NH1	2.52	0.43
7:UJ:75:SER:O	7:UJ:78:SER:OG	2.29	0.43
7:UJ:210:TYR:CE1	7:UJ:213:LEU:HB2	2.54	0.43
10:UM:204:ASP:OD2	10:UM:206:ARG:NH2	2.52	0.43
12:UO:25:ARG:NH1	50:C1:85:U:OP2	2.52	0.43
14:UR:401:ILE:HG13	14:UR:407:GLN:C	2.44	0.43
20:CD:15:LEU:HD21	20:CD:80:LEU:HD11	2.01	0.43
22:CG:167:ARG:NE	22:CG:598:ARG:HH12	2.16	0.43
29:CN:144:LEU:HD13	29:CN:150:ILE:HG12	2.01	0.43
40:Cg:127:ILE:HG12	40:Cg:132:ILE:HD11	2.01	0.43
44:Ck:43:VAL:HG11	44:Ck:145:LEU:HD12	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:C1:221:A:O2'	50:C1:224:C:N4	2.42	0.43
50:C1:1497:U:O2	50:C1:1499:G:N1	2.52	0.43
50:C1:1503:U:H2'	50:C1:1504:A:H8	1.83	0.43
51:C2:160:U:H2'	51:C2:161:G:C8	2.54	0.43
53:UT:108:VAL:HG11	53:UT:143:ARG:HH21	1.82	0.43
53:UT:184:ARG:HD3	53:UT:231:PHE:HD1	1.84	0.43
53:UT:255:ILE:O	53:UT:258:MET:HB3	2.19	0.43
53:UT:557:LYS:HD2	53:UT:557:LYS:HA	1.81	0.43
53:UT:1229:ASP:OD1	53:UT:1232:LYS:NZ	2.36	0.43
53:UT:1863:ILE:HA	53:UT:1866:LEU:HG	2.00	0.43
53:UT:2146:TYR:HA	53:UT:2147:PRO:HD3	1.85	0.43
59:CY:44:LYS:HG3	59:CY:100:THR:HG21	2.01	0.43
1:UA:619:SER:HB3	1:UA:672:GLU:HA	2.01	0.42
1:UA:715:ILE:HG23	1:UA:736:MET:HB3	2.00	0.42
3:UC:308:LEU:HG	3:UC:312:ARG:HE	1.84	0.42
6:UG:355:LEU:HD22	6:UG:368:LYS:HA	2.01	0.42
7:UJ:836:THR:O	7:UJ:914:LYS:NZ	2.41	0.42
7:UJ:1091:SER:O	7:UJ:1095:HIS:ND1	2.44	0.42
9:UL:201:TRP:HA	9:UL:208:CYS:HA	2.00	0.42
9:UL:881:VAL:HA	9:UL:884:THR:HG22	2.01	0.42
10:UM:612:ARG:NH1	10:UM:632:TYR:OH	2.52	0.42
15:UU:961:ILE:HD13	15:UU:971:LEU:HD13	2.00	0.42
18:CA:196:MET:HE3	18:CA:196:MET:HB3	1.91	0.42
29:CN:114:ILE:HB	29:CN:122:ILE:HB	2.01	0.42
32:CR:258:THR:HG23	32:CR:261:GLN:H	1.84	0.42
32:CS:125:LEU:HB3	32:CS:131:ILE:HD11	2.01	0.42
32:CS:541:VAL:HA	32:CS:544:TYR:HB2	2.00	0.42
38:Ce:55:ILE:HG21	38:Ce:182:VAL:HG23	2.01	0.42
39:Cf:89:GLU:OE1	39:Cf:92:ARG:NH2	2.52	0.42
41:Ch:129:TYR:HA	41:Ch:132:VAL:HG12	2.01	0.42
52:CW:119:ARG:NH2	60:CZ:540:LYS:O	2.37	0.42
53:UT:1313:LEU:HD22	53:UT:1358:LEU:HD21	2.01	0.42
53:UT:1712:VAL:HA	53:UT:1715:ILE:HD12	1.99	0.42
53:UT:1723:LEU:HD21	53:UT:1727:LEU:HB2	2.01	0.42
53:UT:1885:THR:HA	53:UT:1888:LYS:NZ	2.34	0.42
55:UI:214:LEU:HA	55:UI:217:TRP:HB2	2.01	0.42
5:UF:130:MET:SD	5:UF:147:ALA:HB2	2.59	0.42
5:UF:377:LEU:HD12	5:UF:381:MET:HE3	2.00	0.42
7:UJ:297:VAL:HG12	7:UJ:300:TRP:HZ3	1.85	0.42
9:UL:19:SER:OG	9:UL:20:SER:N	2.51	0.42
10:UM:506:PRO:HD2	10:UM:526:ARG:HD3	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:UQ:753:VAL:HG13	13:UQ:763:ALA:HB3	2.01	0.42
15:UU:139:GLN:NE2	15:UU:156:LEU:HB2	2.35	0.42
15:UU:642:LEU:HD22	15:UU:667:LYS:HD3	2.00	0.42
24:CI:555:GLN:HA	24:CI:558:ARG:HB2	2.00	0.42
25:CJ:75:GLU:HG3	25:CJ:94:LEU:HD13	2.01	0.42
32:CR:850:ASP:HB3	32:CR:853:VAL:HG23	2.01	0.42
32:CS:169:VAL:O	32:CS:173:TYR:HD2	2.03	0.42
32:CS:494:LEU:HB2	32:CS:496:LEU:HD13	2.00	0.42
32:CS:644:TYR:HA	32:CS:647:MET:HE1	2.01	0.42
38:Ce:57:VAL:HG11	38:Ce:178:THR:HG23	2.01	0.42
53:UT:1021:LEU:HB3	53:UT:1025:ARG:NH2	2.34	0.42
53:UT:1164:ILE:HD11	53:UT:1186:LEU:HD23	2.00	0.42
53:UT:2066:ARG:HA	53:UT:2105:ARG:HH12	1.84	0.42
54:UH:778:ASP:O	54:UH:782:ARG:HG2	2.19	0.42
2:UB:578:MET:HE1	2:UB:617:ALA:HB1	2.00	0.42
6:UG:222:MET:HG2	6:UG:233:THR:HG22	2.01	0.42
7:UJ:98:VAL:HG11	7:UJ:127:ILE:HD12	2.01	0.42
7:UJ:994:CYS:O	7:UJ:998:SER:HB2	2.19	0.42
7:UJ:1149:LEU:HA	7:UJ:1149:LEU:HD23	1.87	0.42
10:UM:614:VAL:HB	10:UM:626:LEU:HD11	2.00	0.42
12:UO:180:THR:HG22	12:UO:181:ARG:HH11	1.84	0.42
14:UR:170:GLU:O	14:UR:174:ARG:HG2	2.19	0.42
15:UU:567:MET:HE2	15:UU:577:GLN:HB3	2.01	0.42
18:CB:113:THR:H	18:CB:124:LYS:HG3	1.83	0.42
23:CH:110:ILE:HD12	23:CH:110:ILE:HA	1.91	0.42
24:CI:557:LEU:HD11	24:CI:561:ARG:HH21	1.84	0.42
28:CM:422:GLU:O	28:CM:426:SER:CB	2.67	0.42
29:CO:27:ILE:HD11	29:CO:111:GLN:HB2	2.00	0.42
31:CQ:80:ILE:HA	31:CQ:126:SER:HB3	2.01	0.42
32:CR:27:PHE:HB2	32:CR:150:VAL:HG22	2.01	0.42
32:CR:342:TYR:HB3	32:CR:361:ILE:HD13	2.01	0.42
32:CS:837:ASP:HA	32:CS:840:ARG:HG2	2.02	0.42
33:CT:124:LYS:NZ	50:C1:1082:G:N7	2.46	0.42
35:Cb:21:ASP:OD1	35:Cb:22:LYS:N	2.44	0.42
38:Ce:102:ARG:HD2	38:Ce:131:VAL:HG13	2.00	0.42
44:Ck:71:ILE:HG21	44:Ck:145:LEU:HD21	2.00	0.42
50:C1:749:G:H4'	53:UT:704:ARG:HH22	1.85	0.42
53:UT:381:MET:SD	53:UT:382:ASP:N	2.93	0.42
53:UT:432:TYR:OH	53:UT:807:LEU:O	2.34	0.42
53:UT:1583:PHE:HE2	53:UT:1600:ALA:HB2	1.84	0.42
54:UH:78:SER:HB2	54:UH:105:VAL:CG1	2.49	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:CX:411:HIS:CG	58:CX:442:HIS:HB2	2.54	0.42
60:CZ:331:LEU:HD23	60:CZ:331:LEU:HA	1.90	0.42
4:UD:22:THR:HG22	4:UD:43:ARG:H	1.84	0.42
4:UD:647:LEU:O	4:UD:658:ILE:HA	2.19	0.42
5:UF:84:THR:OG1	5:UF:85:SER:N	2.52	0.42
7:UJ:713:HIS:O	7:UJ:717:THR:HB	2.20	0.42
7:UJ:725:ARG:HG2	7:UJ:728:ARG:HH21	1.84	0.42
9:UL:712:VAL:HA	9:UL:721:ARG:O	2.20	0.42
10:UM:253:ASP:OD1	10:UM:253:ASP:N	2.49	0.42
13:UQ:197:VAL:HG21	13:UQ:274:TRP:NE1	2.33	0.42
23:CH:117:LEU:HD21	23:CH:130:VAL:HG21	2.01	0.42
24:CI:240:THR:HG23	24:CI:241:HIS:CD2	2.54	0.42
28:CM:237:VAL:HB	28:CM:443:VAL:HG12	2.01	0.42
28:CM:243:ASN:N	28:CM:258:ALA:O	2.44	0.42
34:Ca:11:LYS:HE2	34:Ca:11:LYS:HB2	1.94	0.42
45:Cm:48:GLY:HA3	45:Cm:64:GLN:O	2.19	0.42
47:Co:346:ASN:HB2	47:Co:353:GLN:NE2	2.27	0.42
50:C1:312:G:O2'	50:C1:328:A:N6	2.52	0.42
53:UT:1408:TYR:HA	53:UT:1411:ARG:HD2	2.01	0.42
1:UA:773:LEU:HD23	1:UA:797:LEU:HD21	2.02	0.42
2:UB:564:PRO:HB2	56:US:513:PRO:HD2	2.02	0.42
4:UD:367:HIS:CD2	4:UD:368:LEU:HG	2.55	0.42
12:UO:449:ASP:HB3	12:UO:452:ILE:HB	2.02	0.42
16:UX:94:CYS:O	16:UX:98:GLU:HG3	2.20	0.42
18:CB:247:LEU:O	20:CD:120:ARG:NH1	2.42	0.42
32:CS:186:ASN:HA	32:CS:189:PHE:HB3	2.02	0.42
35:Cb:116:ASP:OD1	35:Cb:117:GLU:N	2.52	0.42
35:Cb:212:ASP:OD1	35:Cb:213:ALA:N	2.52	0.42
36:Cc:50:GLN:HE21	36:Cc:73:ASN:HA	1.85	0.42
53:UT:256:MET:SD	53:UT:301:VAL:HA	2.60	0.42
53:UT:710:LEU:HD11	53:UT:737:MET:HG2	2.02	0.42
54:UH:869:LEU:HG	55:UE:273:ARG:HH12	1.83	0.42
4:UD:647:LEU:HD23	4:UD:659:PHE:HD1	1.85	0.42
5:UF:162:ALA:HB2	11:UN:359:PRO:HA	2.01	0.42
6:UG:270:ASN:HB3	6:UG:272:ILE:HG12	2.02	0.42
11:UN:283:MET:HE2	53:UT:2204:PHE:HE2	1.84	0.42
13:UQ:550:LEU:HB3	13:UQ:588:TRP:HB2	2.01	0.42
15:UU:418:TRP:CE2	15:UU:430:GLU:HB2	2.55	0.42
15:UU:857:ILE:HG23	31:CQ:254:ARG:HH21	1.84	0.42
15:UU:1013:LEU:HD23	15:UU:1013:LEU:HA	1.90	0.42
16:UX:59:LEU:HD11	16:UX:137:ARG:HD2	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:UZ:24:LEU:HG	17:UZ:28:LYS:NZ	2.35	0.42
17:UZ:25:LYS:HA	17:UZ:28:LYS:HE2	2.02	0.42
24:CI:148:MET:HE1	24:CI:897:PHE:HB2	2.00	0.42
24:CI:617:ASP:HA	24:CI:620:ARG:HG2	2.02	0.42
32:CS:895:ASP:OD1	32:CS:896:THR:N	2.53	0.42
39:Cf:92:ARG:HH12	52:CW:140:ARG:NH1	2.18	0.42
40:Cg:73:ALA:HB1	40:Cg:77:ARG:NH2	2.35	0.42
60:CZ:272:GLN:HG2	60:CZ:274:GLU:H	1.85	0.42
60:CZ:415:MET:HA	60:CZ:418:ARG:HB3	2.02	0.42
55:UI:239:LEU:HA	55:UI:239:LEU:HD12	1.80	0.42
4:UD:425:ILE:HG21	4:UD:431:ILE:HD11	2.02	0.42
4:UD:487:SER:OG	4:UD:491:ARG:N	2.49	0.42
18:CB:199:ARG:HA	18:CB:199:ARG:HD2	1.76	0.42
19:CC:326:THR:HA	19:CC:394:ASN:HD21	1.84	0.42
22:CG:426:LYS:NZ	59:CY:237:ASP:O	2.52	0.42
24:CI:938:PHE:HA	27:CL:511:ARG:NH2	2.35	0.42
32:CS:58:TRP:HB2	32:CS:106:TYR:HA	2.01	0.42
32:CS:378:HIS:CD2	32:CS:379:VAL:HG13	2.54	0.42
32:CS:525:THR:OG1	32:CS:706:PRO:O	2.31	0.42
32:CS:910:ALA:O	32:CS:914:LYS:HG2	2.20	0.42
40:Cg:129:GLN:HB2	50:C1:1097:U:H4'	2.02	0.42
50:C1:311:G:H21	50:C1:329:A:H62	1.67	0.42
50:C1:781:G:H2'	50:C1:782:G:C8	2.53	0.42
52:CW:170:ARG:NH2	52:CW:180:ARG:O	2.40	0.42
53:UT:585:TYR:O	53:UT:589:CYS:HB3	2.19	0.42
53:UT:2052:GLN:O	53:UT:2056:LYS:HG3	2.19	0.42
56:US:383:LYS:HD2	56:US:383:LYS:HA	1.77	0.42
58:CX:303:PHE:HD1	58:CX:307:LEU:HD13	1.85	0.42
7:UJ:1789:ILE:HD12	7:UJ:1789:ILE:HA	1.93	0.42
8:UK:58:ARG:HH12	8:UK:60:GLU:HA	1.85	0.42
8:UK:79:ARG:HA	8:UK:79:ARG:HD3	1.78	0.42
9:UL:650:ASP:OD1	9:UL:651:SER:N	2.47	0.42
10:UM:120:ASP:OD2	10:UM:124:THR:OG1	2.33	0.42
10:UM:458:ARG:HB3	10:UM:460:TRP:HE1	1.85	0.42
13:UQ:716:ASP:O	13:UQ:720:GLY:HA2	2.20	0.42
15:UU:152:VAL:HG22	15:UU:161:VAL:HG22	2.01	0.42
18:CA:110:SER:HB3	33:CT:141:ILE:HD11	2.02	0.42
19:CC:278:ALA:O	19:CC:282:THR:HG23	2.19	0.42
22:CG:410:VAL:HG12	22:CG:469:LEU:HD21	2.01	0.42
23:CH:406:VAL:HG21	24:CI:809:ARG:HH22	1.84	0.42
32:CR:24:ARG:HH21	32:CR:140:ILE:HG22	1.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:CR:93:ASP:OD1	32:CR:93:ASP:N	2.41	0.42
32:CS:272:ILE:HG22	32:CS:305:TYR:HD2	1.85	0.42
37:Cd:85:ARG:NH1	50:C1:745:U:H5''	2.34	0.42
39:Cf:73:THR:O	39:Cf:74:ARG:HD3	2.20	0.42
58:CX:275:ARG:O	58:CX:279:HIS:ND1	2.43	0.42
58:CX:339:ALA:HA	58:CX:342:ILE:HG22	2.02	0.42
1:UA:540:SER:OG	1:UA:541:GLU:N	2.53	0.42
4:UD:756:ARG:CZ	4:UD:758:ARG:HH12	2.33	0.42
7:UJ:1699:ILE:HD13	7:UJ:1740:ALA:HB2	2.02	0.42
8:UK:84:THR:HG22	8:UK:86:THR:HG23	2.01	0.42
9:UL:461:ARG:HE	9:UL:497:ALA:HB2	1.84	0.42
10:UM:311:LYS:HZ3	10:UM:362:LEU:HD22	1.85	0.42
10:UM:325:ALA:HA	10:UM:335:LEU:O	2.19	0.42
10:UM:801:LEU:HD22	10:UM:805:GLN:HB3	2.02	0.42
12:UO:406:PRO:HA	14:UR:321:LYS:HD3	2.02	0.42
13:UQ:738:LYS:HD3	13:UQ:782:VAL:HG22	2.02	0.42
18:CA:230:VAL:HG22	18:CA:232:GLN:HG2	2.01	0.42
22:CG:504:ILE:HG22	22:CG:506:GLY:H	1.84	0.42
24:CI:780:VAL:HG11	32:CR:225:GLU:OE2	2.20	0.42
29:CN:90:ASP:OD1	29:CN:90:ASP:N	2.52	0.42
32:CR:504:LYS:O	32:CR:508:THR:OG1	2.30	0.42
32:CS:635:ILE:O	32:CS:725:VAL:HG23	2.20	0.42
34:Ca:214:LYS:HE2	34:Ca:216:LYS:HD3	2.01	0.42
37:Cd:10:ASN:HD21	53:UT:708:ALA:HB2	1.85	0.42
50:C1:1131:U:O2'	50:C1:1180:C:O2'	2.34	0.42
50:C1:1652:C:H2'	50:C1:1653:G:H8	1.85	0.42
52:CW:229:TYR:CZ	52:CW:236:ARG:HD2	2.54	0.42
53:UT:155:MET:HB3	53:UT:160:VAL:HG11	2.01	0.42
53:UT:392:VAL:O	53:UT:396:ILE:HG12	2.20	0.42
54:UH:749:ASP:OD2	54:UH:751:TRP:NE1	2.53	0.42
56:US:125:LEU:HD23	56:US:125:LEU:HA	1.93	0.42
56:US:375:ALA:HA	56:US:378:VAL:HG22	2.02	0.42
58:CX:284:LEU:HD22	58:CX:323:ILE:HB	2.02	0.42
5:UF:189:LEU:HD23	5:UF:189:LEU:HA	1.90	0.42
6:UG:215:LYS:HG2	50:C1:291:C:C2	2.55	0.42
7:UJ:75:SER:N	7:UJ:78:SER:OG	2.51	0.42
7:UJ:1109:ASP:O	7:UJ:1112:PHE:HB3	2.19	0.42
7:UJ:1793:LEU:HD23	7:UJ:1797:LEU:HD21	2.02	0.42
9:UL:153:ASP:CG	9:UL:154:GLN:H	2.28	0.42
10:UM:381:TYR:CD1	10:UM:389:MET:HE1	2.55	0.42
13:UQ:263:ILE:HD12	13:UQ:329:LEU:HD23	2.00	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:UU:514:ALA:HB2	15:UU:547:VAL:HG13	2.02	0.42
19:CC:72:GLY:HA3	19:CC:104:LYS:HE3	2.02	0.42
19:CC:197:ARG:NH2	20:CD:174:GLU:OE2	2.52	0.42
22:CG:195:TRP:CD1	22:CG:226:ARG:HA	2.55	0.42
23:CH:154:ARG:HE	23:CH:154:ARG:HB3	1.55	0.42
28:CM:93:VAL:HB	28:CM:104:TRP:HB3	2.01	0.42
32:CR:118:ASN:O	32:CR:142:THR:OG1	2.33	0.42
32:CR:229:LEU:HD23	32:CR:233:ALA:HB1	2.01	0.42
32:CR:229:LEU:HB3	32:CR:233:ALA:HB3	2.01	0.42
32:CS:608:GLN:HE21	32:CS:616:TRP:CD1	2.37	0.42
47:Co:342:LYS:HB2	47:Co:355:VAL:HG12	2.02	0.42
50:C1:466:A:OP1	50:C1:467:C:N4	2.42	0.42
50:C1:1235:C:H2'	50:C1:1236:G:H8	1.85	0.42
50:C1:1625:G:H2'	50:C1:1626:G:C8	2.55	0.42
53:UT:1874:GLN:HA	53:UT:1877:LEU:HD23	2.02	0.42
53:UT:2188:ASP:O	53:UT:2191:THR:OG1	2.29	0.42
55:UE:253:LEU:HD12	55:UE:253:LEU:HA	1.92	0.42
57:Cl:25:LYS:HD2	57:Cl:25:LYS:O	2.20	0.42
58:CX:415:LEU:HA	58:CX:449:ILE:HG12	2.01	0.42
60:CZ:394:ILE:HD13	60:CZ:403:ILE:HG12	2.01	0.42
2:UB:116:ILE:HG12	23:CH:66:ILE:HB	2.01	0.41
3:UC:596:GLU:O	3:UC:603:LYS:HB2	2.20	0.41
4:UD:44:LEU:HD21	4:UD:341:VAL:HG11	2.02	0.41
6:UG:398:VAL:HG12	6:UG:409:ILE:HG12	2.01	0.41
7:UJ:612:ALA:HA	7:UJ:664:LEU:HD11	2.01	0.41
10:UM:203:GLN:OE1	34:Ca:29:TRP:HD1	2.03	0.41
15:UU:351:VAL:HA	15:UU:364:TRP:O	2.19	0.41
15:UU:456:THR:HG23	15:UU:459:ASP:H	1.85	0.41
19:CC:269:VAL:HG13	20:CD:281:ARG:HH21	1.85	0.41
20:CD:172:LEU:HD11	20:CD:271:ARG:NH1	2.35	0.41
21:CF:31:TYR:O	21:CF:33:GLN:NE2	2.52	0.41
32:CR:722:TYR:HB2	32:CR:763:ILE:HD11	2.02	0.41
35:Cb:128:ARG:HG2	35:Cb:140:VAL:HG22	2.00	0.41
37:Cd:198:ARG:HA	37:Cd:201:GLN:HG3	2.02	0.41
47:Co:346:ASN:HB3	47:Co:351:ARG:HG3	2.02	0.41
50:C1:625:C:H2'	50:C1:626:A:C8	2.55	0.41
52:CW:139:GLY:HA2	52:CW:155:ALA:HA	2.02	0.41
53:UT:1790:LEU:O	53:UT:1793:THR:OG1	2.35	0.41
1:UA:358:ALA:HB1	1:UA:385:VAL:HG13	2.00	0.41
7:UJ:1478:TYR:HD1	7:UJ:1481:LEU:HD12	1.85	0.41
7:UJ:1524:SER:HB2	7:UJ:1583:TRP:CG	2.54	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:UL:434:ILE:HD11	9:UL:712:VAL:HG22	2.02	0.41
9:UL:456:THR:O	9:UL:458:GLN:HG2	2.21	0.41
9:UL:600:TYR:OH	23:CH:303:GLY:HA2	2.21	0.41
13:UQ:212:THR:HG22	13:UQ:215:SER:HB3	2.02	0.41
13:UQ:586:LYS:HE3	13:UQ:601:ARG:HD3	2.01	0.41
13:UQ:790:ALA:HA	13:UQ:812:LEU:O	2.20	0.41
15:UU:329:PRO:HA	15:UU:330:PRO:HD3	1.95	0.41
18:CA:187:HIS:HB3	19:CC:166:VAL:HG23	2.01	0.41
18:CB:250:GLY:HA2	18:CB:306:TYR:O	2.20	0.41
19:CC:74:MET:HE3	19:CC:79:LYS:HB2	2.00	0.41
24:CI:397:ALA:HB2	32:CR:707:PRO:HG3	2.02	0.41
24:CI:1000:PHE:CE2	24:CI:1002:ASN:HB2	2.55	0.41
27:CL:487:ILE:O	27:CL:491:GLU:HG3	2.20	0.41
32:CR:386:VAL:HG13	32:CR:406:TYR:HE2	1.85	0.41
32:CR:518:LEU:HD11	32:CR:586:ILE:HD13	2.02	0.41
37:Cd:137:ARG:HE	50:C1:753:A:P	2.44	0.41
40:Cg:110:LEU:HD23	40:Cg:110:LEU:HA	1.82	0.41
48:Cp:9:LYS:HE3	48:Cp:9:LYS:HB3	1.84	0.41
50:C1:770:C:H42	50:C1:781:G:H1	1.68	0.41
52:CW:264:SER:HA	52:CW:289:PRO:HA	2.02	0.41
53:UT:333:GLN:HG3	53:UT:334:GLN:HG3	2.02	0.41
53:UT:536:ARG:HA	53:UT:539:LYS:HD3	2.02	0.41
53:UT:1349:ARG:HA	53:UT:1349:ARG:HD3	1.94	0.41
53:UT:1912:LEU:HD12	53:UT:1989:PHE:HE2	1.85	0.41
55:UE:211:ALA:O	55:UE:215:MET:HG3	2.20	0.41
56:US:459:GLU:H	56:US:459:GLU:CD	2.29	0.41
59:CY:38:ILE:HG22	59:CY:41:LEU:H	1.84	0.41
1:UA:495:TRP:HB3	1:UA:497:ILE:HG23	2.02	0.41
1:UA:541:GLU:O	1:UA:543:GLN:N	2.53	0.41
7:UJ:930:HIS:H	7:UJ:969:MET:HE3	1.85	0.41
7:UJ:1305:LEU:HD21	7:UJ:1339:TYR:CD2	2.56	0.41
7:UJ:1582:GLU:HA	7:UJ:1585:THR:HG22	2.01	0.41
10:UM:273:ARG:HG3	10:UM:277:LEU:HD11	2.01	0.41
14:UR:389:ALA:HB3	14:UR:397:MET:HB2	2.02	0.41
19:CC:232:LEU:HD23	19:CC:259:LYS:HE3	2.03	0.41
23:CH:148:LEU:HD22	23:CH:152:THR:HG21	2.02	0.41
27:CL:122:PRO:HB2	27:CL:123:ALA:H	1.67	0.41
29:CN:180:LEU:HD13	29:CN:206:VAL:HG22	2.02	0.41
30:CP:113:LYS:HE3	30:CP:113:LYS:HB2	1.82	0.41
34:Ca:137:LEU:HD22	34:Ca:215:VAL:HG22	2.01	0.41
46:Cn:51:GLY:HA2	46:Cn:77:ILE:HG13	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:UT:583:HIS:HE1	53:UT:615:SER:HB2	1.86	0.41
53:UT:1409:ASN:OD1	53:UT:1410:THR:N	2.53	0.41
53:UT:1770:PHE:HA	53:UT:1773:ILE:HD12	2.02	0.41
53:UT:2099:LEU:HA	53:UT:2102:VAL:HG12	2.01	0.41
56:US:195:ASP:HB3	56:US:243:PHE:HD1	1.84	0.41
59:CY:275:TYR:HA	59:CY:278:THR:HG22	2.03	0.41
60:CZ:536:ARG:HH11	60:CZ:537:ARG:H	1.68	0.41
2:UB:320:THR:OG1	2:UB:321:GLU:N	2.53	0.41
7:UJ:139:PHE:HB3	7:UJ:148:PHE:HD1	1.84	0.41
7:UJ:655:LEU:HG	7:UJ:660:LEU:HD23	2.02	0.41
7:UJ:856:LEU:HA	7:UJ:859:VAL:HG12	2.01	0.41
7:UJ:1131:PHE:O	7:UJ:1135:LEU:HG	2.20	0.41
7:UJ:1553:ILE:HD12	7:UJ:1553:ILE:HA	1.89	0.41
8:UK:64:TYR:HB2	8:UK:67:MET:HG3	2.03	0.41
10:UM:516:ASP:OD1	10:UM:516:ASP:N	2.53	0.41
16:UX:166:MET:HA	16:UX:174:ALA:O	2.20	0.41
18:CA:213:PRO:HA	18:CA:216:TYR:CZ	2.55	0.41
18:CA:235:GLN:HG2	18:CA:255:ILE:HD11	2.03	0.41
18:CB:174:VAL:HG22	18:CB:178:GLY:HA3	2.03	0.41
24:CI:528:ARG:HA	32:CR:247:GLN:HE22	1.85	0.41
28:CM:319:ASP:HA	28:CM:395:ARG:NH1	2.35	0.41
28:CM:394:HIS:C	28:CM:395:ARG:HD2	2.46	0.41
32:CR:200:LEU:HD23	32:CR:200:LEU:HA	1.92	0.41
32:CS:289:ARG:HH12	32:CS:476:GLU:N	2.18	0.41
35:Cb:113:ARG:HH21	53:UT:77:ARG:HE	1.67	0.41
50:C1:662:A:H62	53:UT:793:HIS:CE1	2.37	0.41
53:UT:178:LEU:HD22	53:UT:179:LEU:HD22	2.03	0.41
53:UT:579:SER:O	53:UT:583:HIS:ND1	2.50	0.41
53:UT:717:TYR:CE2	53:UT:756:VAL:HG13	2.54	0.41
53:UT:1260:THR:HG21	53:UT:1296:ILE:HG21	2.02	0.41
53:UT:1732:LEU:HD21	53:UT:1772:PHE:CD1	2.55	0.41
53:UT:1923:TYR:OH	53:UT:1995:ASP:OD2	2.27	0.41
56:US:388:LEU:O	56:US:392:ALA:HB2	2.20	0.41
58:CX:217:LEU:HD11	58:CX:249:ALA:HB1	2.02	0.41
4:UD:529:LEU:O	4:UD:531:ARG:NH1	2.54	0.41
4:UD:660:ASN:O	4:UD:664:GLY:N	2.50	0.41
12:UO:528:ALA:O	12:UO:532:ARG:HG2	2.21	0.41
13:UQ:165:ILE:HD13	13:UQ:205:LEU:HD23	2.01	0.41
25:CJ:56:GLN:O	25:CJ:60:ARG:HG2	2.20	0.41
32:CS:56:VAL:HA	32:CS:122:MET:O	2.20	0.41
45:Cm:128:PHE:HZ	49:CU:281:MET:HE1	1.86	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:Cp:13:VAL:HG13	48:Cp:29:VAL:HG13	2.02	0.41
50:C1:1170:G:H5''	50:C1:1171:C:H5'	2.02	0.41
53:UT:1073:LEU:HD21	53:UT:1137:ALA:HB2	2.03	0.41
54:UH:596:LYS:HB3	54:UH:596:LYS:HE2	1.79	0.41
55:UE:162:ARG:HG3	55:UE:192:LEU:HD21	2.03	0.41
2:UB:672:ARG:HB3	2:UB:690:ARG:NH2	2.35	0.41
4:UD:138:GLN:NE2	4:UD:197:HIS:O	2.41	0.41
4:UD:307:ALA:HB1	13:UQ:328:ASN:ND2	2.36	0.41
6:UG:114:GLN:O	6:UG:118:VAL:HG23	2.21	0.41
7:UJ:1576:ILE:HD12	7:UJ:1580:PHE:HE2	1.85	0.41
9:UL:375:ALA:HB3	9:UL:384:GLN:HB2	2.03	0.41
9:UL:903:ARG:HD3	10:UM:885:GLU:HG2	2.03	0.41
10:UM:209:ILE:HB	10:UM:218:THR:HG23	2.01	0.41
10:UM:326:VAL:HG12	10:UM:335:LEU:HB3	2.01	0.41
11:UN:274:PRO:HA	11:UN:277:LYS:HG3	2.03	0.41
12:UO:203:ASN:HB2	12:UO:219:ALA:HB3	2.02	0.41
13:UQ:786:SER:O	13:UQ:788:SER:N	2.54	0.41
15:UU:39:ARG:HD3	15:UU:41:ILE:HG22	2.02	0.41
19:CC:271:LEU:O	19:CC:275:ARG:HG3	2.21	0.41
27:CL:131:HIS:HB2	27:CL:135:PHE:HE2	1.86	0.41
27:CL:498:ARG:HD3	27:CL:502:LEU:HB3	2.02	0.41
28:CM:339:LYS:HZ3	28:CM:339:LYS:HB2	1.85	0.41
28:CM:378:LEU:HD23	28:CM:378:LEU:HA	1.84	0.41
29:CN:95:CYS:HA	29:CN:98:THR:HG22	2.02	0.41
32:CS:592:GLY:HA3	32:CS:631:SER:HA	2.02	0.41
32:CS:656:LEU:HD22	32:CS:665:PHE:HZ	1.84	0.41
32:CS:855:LEU:HA	32:CS:858:MET:HG2	2.02	0.41
37:Cd:160:ARG:HD3	50:C1:653:U:O2	2.20	0.41
38:Ce:87:LEU:HB3	38:Ce:96:VAL:HG11	2.02	0.41
50:C1:843:U:O2'	50:C1:845:C:OP2	2.31	0.41
53:UT:80:GLN:O	53:UT:84:ARG:HG3	2.20	0.41
53:UT:187:TYR:CE2	53:UT:235:VAL:HG12	2.56	0.41
53:UT:1157:ARG:HD3	53:UT:1199:PHE:CE1	2.56	0.41
58:CX:240:ASP:OD1	58:CX:240:ASP:N	2.52	0.41
58:CX:415:LEU:HD22	58:CX:445:ILE:HG23	2.02	0.41
2:UB:527:SER:HA	2:UB:530:LEU:HG	2.02	0.41
4:UD:644:ASP:OD1	4:UD:645:TYR:N	2.49	0.41
6:UG:283:THR:HG22	6:UG:295:LYS:HG2	2.01	0.41
6:UG:364:THR:HB	6:UG:388:TRP:HB3	2.03	0.41
7:UJ:969:MET:O	7:UJ:972:THR:OG1	2.30	0.41
9:UL:425:HIS:CE1	9:UL:450:LYS:HG3	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:UM:120:ASP:CG	10:UM:125:LEU:H	2.29	0.41
10:UM:788:LEU:HD23	10:UM:832:ALA:HA	2.02	0.41
13:UQ:438:GLN:OE1	13:UQ:501:GLN:NE2	2.53	0.41
22:CG:595:LYS:HE3	22:CG:595:LYS:HB2	1.96	0.41
23:CH:150:ILE:HD11	23:CH:173:LEU:HD21	2.03	0.41
24:CI:835:PHE:O	24:CI:841:ARG:HA	2.21	0.41
26:CK:50:LYS:HG2	49:CU:219:ILE:HG22	2.03	0.41
28:CM:73:CYS:SG	28:CM:74:LYS:N	2.94	0.41
28:CM:89:GLY:O	28:CM:108:ALA:N	2.53	0.41
29:CN:99:LEU:HA	29:CN:99:LEU:HD23	1.84	0.41
30:CP:187:ASP:HB3	30:CP:192:ILE:HB	2.03	0.41
32:CS:317:PRO:HG3	32:CS:352:PHE:HA	2.03	0.41
32:CS:425:SER:O	32:CS:429:ILE:HG12	2.21	0.41
37:CD:29:ASP:O	37:CD:30:LYS:HD3	2.21	0.41
46:CN:53:VAL:O	46:CN:99:ASN:CA	2.68	0.41
53:UT:10:LEU:HD23	53:UT:10:LEU:HA	1.93	0.41
53:UT:184:ARG:HG3	53:UT:234:HIS:CD2	2.56	0.41
53:UT:1694:LEU:HB3	53:UT:1716:ILE:HD11	2.01	0.41
54:UH:486:LEU:HD12	54:UH:486:LEU:HA	1.94	0.41
58:CX:446:ALA:HA	58:CX:449:ILE:HD12	2.02	0.41
2:UB:653:TYR:HA	2:UB:740:TRP:CZ2	2.55	0.41
4:UD:409:ALA:HA	4:UD:412:ASN:HB2	2.02	0.41
6:UG:181:ARG:N	6:UG:195:ALA:O	2.52	0.41
7:UJ:127:ILE:HG23	7:UJ:131:ASN:HB2	2.02	0.41
7:UJ:812:ARG:O	7:UJ:816:MET:HG3	2.21	0.41
7:UJ:944:LEU:HD22	7:UJ:955:LEU:HD22	2.03	0.41
7:UJ:1106:GLY:HA2	7:UJ:1107:PRO:HD3	1.82	0.41
7:UJ:1633:LEU:HG	7:UJ:1647:TRP:HE1	1.85	0.41
8:UK:118:ILE:HD13	51:C2:260:G:H5'	2.03	0.41
9:UL:658:ILE:HA	9:UL:659:PRO:HD3	1.94	0.41
10:UM:482:VAL:HA	10:UM:514:SER:HB2	2.03	0.41
12:UO:482:LEU:HD22	12:UO:526:LEU:HD22	2.03	0.41
13:UQ:416:ASP:OD2	13:UQ:486:GLN:N	2.54	0.41
17:UZ:215:ARG:HE	17:UZ:219:GLU:HB3	1.86	0.41
19:CC:381:TYR:CZ	19:CC:414:ARG:HG3	2.56	0.41
23:CH:261:LEU:HD21	50:C1:1715:A:C5	2.56	0.41
32:CR:184:ARG:HB2	32:CR:560:SER:HB2	2.02	0.41
32:CR:399:VAL:HG12	32:CR:403:MET:HE2	2.02	0.41
32:CS:28:VAL:HG21	32:CS:193:LEU:HD13	2.03	0.41
32:CS:117:GLY:O	65:CS:1101:ADP:O3'	2.39	0.41
32:CS:565:HIS:HA	32:CS:588:VAL:O	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:Ca:86:LEU:HB3	34:Ca:98:THR:HB	2.02	0.41
45:Cm:35:VAL:O	45:Cm:39:GLN:HG3	2.21	0.41
50:C1:710:A:H2'	50:C1:711:U:O4'	2.20	0.41
53:UT:133:LEU:HD12	53:UT:133:LEU:HA	1.88	0.41
53:UT:486:GLU:HB3	53:UT:487:ILE:H	1.76	0.41
53:UT:968:ARG:O	53:UT:972:GLU:CB	2.69	0.41
53:UT:1431:TRP:HH2	53:UT:1461:LYS:HD3	1.86	0.41
60:CZ:415:MET:HE2	60:CZ:419:ARG:HD2	2.03	0.41
1:UA:112:VAL:HG22	1:UA:157:LEU:HD13	2.01	0.41
2:UB:512:HIS:HB3	2:UB:515:LEU:HG	2.03	0.41
2:UB:701:GLN:NE2	56:US:542:TRP:HA	2.36	0.41
3:UC:275:SER:HA	27:CL:78:LEU:HD11	2.03	0.41
3:UC:454:LEU:HD21	56:US:398:VAL:HG21	2.03	0.41
3:UC:458:THR:HG22	56:US:474:ILE:HG12	2.02	0.41
4:UD:635:PHE:CE1	4:UD:647:LEU:HD13	2.56	0.41
5:UF:394:LEU:HB2	5:UF:399:ARG:NH2	2.35	0.41
6:UG:234:LEU:HD12	6:UG:264:LEU:HB2	2.02	0.41
7:UJ:733:ILE:O	7:UJ:741:ARG:NH1	2.50	0.41
7:UJ:1076:LYS:HB3	7:UJ:1169:LEU:HG	2.02	0.41
7:UJ:1111:LEU:HD23	7:UJ:1147:THR:HG21	2.03	0.41
7:UJ:1451:ALA:HA	7:UJ:1457:ALA:HB1	2.03	0.41
9:UL:895:MET:O	9:UL:899:LEU:HB2	2.21	0.41
10:UM:114:VAL:HA	10:UM:130:ALA:HA	2.01	0.41
10:UM:200:TRP:CZ3	10:UM:210:PHE:HB2	2.56	0.41
10:UM:248:LEU:HD22	10:UM:282:PHE:CE1	2.56	0.41
13:UQ:353:TRP:NE1	50:C1:72:U:OP1	2.31	0.41
13:UQ:356:ARG:HA	13:UQ:454:ARG:HH12	1.84	0.41
13:UQ:751:LEU:O	13:UQ:764:SER:HA	2.20	0.41
15:UU:34:ILE:HG23	15:UU:780:THR:HG23	2.03	0.41
15:UU:384:HIS:NE2	15:UU:410:SER:OG	2.43	0.41
17:UZ:80:PRO:HB3	17:UZ:234:HIS:ND1	2.35	0.41
18:CB:88:LYS:HD2	18:CB:89:GLU:HB3	2.02	0.41
18:CB:104:TYR:CE2	18:CB:165:THR:HG23	2.56	0.41
19:CC:45:GLY:HA3	50:C1:435:A:N1	2.36	0.41
19:CC:140:LYS:NZ	50:C1:436:A:H62	2.19	0.41
20:CD:165:ILE:HD11	20:CD:285:ILE:HD12	2.02	0.41
25:CJ:88:LEU:HD11	25:CJ:97:VAL:HG22	2.03	0.41
28:CM:64:GLY:O	28:CM:92:LYS:NZ	2.54	0.41
28:CM:253:MET:HG3	28:CM:270:ARG:HH11	1.86	0.41
29:CN:196:LEU:HD21	29:CN:202:ILE:HB	2.01	0.41
29:CO:32:LYS:HD2	29:CO:172:PRO:HB3	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:CO:179:THR:HB	29:CO:221:VAL:HG21	2.02	0.41
30:CP:122:ASP:HB2	30:CP:178:LEU:HD22	2.01	0.41
32:CR:630:LEU:HD12	32:CR:631:SER:H	1.86	0.41
32:CS:742:PHE:HA	32:CS:764:ARG:HD3	2.03	0.41
34:Ca:116:LYS:NZ	50:C1:1518:A:OP1	2.54	0.41
34:Ca:185:VAL:O	34:Ca:189:ILE:HG12	2.21	0.41
36:Cc:83:SER:HB2	36:Cc:163:THR:HG21	2.03	0.41
37:Cd:26:HIS:CG	37:Cd:40:PRO:HG2	2.56	0.41
37:Cd:56:ASN:HD22	37:Cd:62:PRO:HA	1.85	0.41
43:Cj:6:ALA:HA	43:Cj:22:CYS:O	2.21	0.41
50:C1:278:A:OP2	50:C1:278:A:H8	2.03	0.41
50:C1:1177:U:H4'	50:C1:1179:G:H4'	2.02	0.41
50:C1:1243:C:H2'	50:C1:1244:G:C8	2.56	0.41
52:CW:236:ARG:HH22	52:CW:239:VAL:HG23	1.86	0.41
52:CW:328:GLU:HA	52:CW:329:PRO:HD3	1.88	0.41
53:UT:488:PHE:O	53:UT:542:THR:OG1	2.34	0.41
53:UT:1208:PRO:HA	53:UT:1211:VAL:HG22	2.01	0.41
53:UT:1329:LEU:HD22	53:UT:1362:PHE:HE2	1.86	0.41
53:UT:1465:ALA:O	53:UT:1469:VAL:HG22	2.20	0.41
53:UT:1940:ARG:NH2	53:UT:2038:LYS:HG3	2.36	0.41
53:UT:2005:LYS:HB2	53:UT:2005:LYS:HE2	1.89	0.41
54:UH:551:ASN:HB3	54:UH:552:LYS:NZ	2.36	0.41
54:UH:554:PHE:HB3	54:UH:567:LEU:HD11	2.03	0.41
54:UH:814:GLN:O	54:UH:818:GLU:HG2	2.21	0.41
56:US:304:MET:HE2	56:US:334:LEU:HD23	2.03	0.41
56:US:332:ARG:HB2	56:US:334:LEU:HD13	2.02	0.41
59:CY:89:LEU:HB3	60:CZ:489:TYR:CZ	2.56	0.41
1:UA:1:MET:SD	1:UA:581:SER:OG	2.75	0.41
1:UA:795:ARG:HH11	15:UU:1033:LEU:HD12	1.84	0.41
5:UF:283:PHE:O	5:UF:287:ARG:HG3	2.21	0.41
7:UJ:32:SER:HB2	7:UJ:123:ARG:NH1	2.33	0.41
7:UJ:578:ARG:NH1	7:UJ:583:ASP:OD1	2.54	0.41
7:UJ:736:ILE:O	7:UJ:739:THR:OG1	2.35	0.41
7:UJ:826:TYR:O	7:UJ:830:LYS:HG2	2.20	0.41
8:UK:89:GLY:HA3	24:CI:1067:THR:HG22	2.02	0.41
9:UL:617:TYR:OH	9:UL:661:ASN:ND2	2.49	0.41
10:UM:881:SER:O	10:UM:884:VAL:HG12	2.21	0.41
14:UR:298:MET:HE1	14:UR:340:PHE:CG	2.56	0.41
14:UR:402:ASN:HD22	14:UR:405:THR:HG22	1.85	0.41
18:CA:197:ALA:O	18:CA:200:ARG:C	2.64	0.41
19:CC:266:ILE:HG21	19:CC:271:LEU:HD13	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:CG:192:LEU:O	22:CG:229:PHE:HA	2.20	0.41
24:CI:110:LYS:HA	24:CI:309:PRO:HG2	2.03	0.41
32:CR:268:PHE:O	32:CR:272:ILE:HG12	2.21	0.41
32:CR:372:ILE:HD13	32:CR:380:LEU:HD21	2.03	0.41
32:CS:600:LEU:HB3	32:CS:601:LYS:HZ2	1.86	0.41
34:Ca:73:LEU:HD23	34:Ca:84:ILE:HD11	2.03	0.41
39:Cf:12:SER:HA	39:Cf:18:ARG:HH21	1.86	0.41
50:C1:176:G:H2'	50:C1:177:G:C8	2.56	0.41
50:C1:500:C:O2'	50:C1:501:U:O4'	2.39	0.41
50:C1:727:G:H2'	50:C1:728:G:C8	2.55	0.41
52:CW:253:SER:HB3	52:CW:258:SER:HB3	2.03	0.41
53:UT:98:TYR:HD2	53:UT:99:HIS:CE1	2.39	0.41
53:UT:183:LEU:O	53:UT:186:THR:OG1	2.32	0.41
53:UT:285:VAL:HG11	53:UT:337:LEU:HD13	2.03	0.41
53:UT:671:LEU:HD23	53:UT:671:LEU:HA	1.90	0.41
53:UT:1020:ARG:HG2	53:UT:1075:MET:HE1	2.03	0.41
53:UT:1449:GLY:O	53:UT:1452:SER:OG	2.32	0.41
53:UT:1900:LEU:HD13	53:UT:1900:LEU:HA	1.92	0.41
55:UE:229:LEU:HD13	55:UE:235:LEU:HB3	2.02	0.41
4:UD:34:LYS:O	4:UD:38:LYS:HG3	2.20	0.40
4:UD:306:MET:HE2	4:UD:312:ARG:HB2	2.02	0.40
7:UJ:452:LEU:HA	7:UJ:455:LYS:HG2	2.04	0.40
7:UJ:742:THR:O	7:UJ:746:LEU:HG	2.21	0.40
8:UK:16:ARG:HD3	50:C1:1159:C:C4	2.56	0.40
9:UL:899:LEU:HA	9:UL:902:VAL:HG12	2.03	0.40
13:UQ:608:THR:HG23	13:UQ:609:LYS:H	1.85	0.40
14:UR:376:PHE:CD2	14:UR:385:MET:HE3	2.56	0.40
16:UX:28:LYS:O	16:UX:32:GLN:HG3	2.21	0.40
19:CC:38:MET:HE3	19:CC:38:MET:HB3	1.85	0.40
20:CD:182:MET:O	20:CD:186:VAL:HG23	2.21	0.40
22:CG:195:TRP:HD1	22:CG:226:ARG:HA	1.86	0.40
22:CG:197:LEU:HD23	22:CG:224:PRO:HB3	2.03	0.40
24:CI:1041:PRO:HG3	33:CT:192:TYR:CZ	2.55	0.40
32:CR:35:LYS:HB3	32:CR:95:PHE:CD1	2.57	0.40
32:CR:315:PRO:HD3	32:CR:394:ILE:HD11	2.03	0.40
37:Cd:191:ARG:NH2	50:C1:868:G:O6	2.54	0.40
38:Ce:140:VAL:HG21	38:Ce:164:LEU:HD22	2.03	0.40
45:Cm:88:LYS:HA	45:Cm:91:THR:HG22	2.02	0.40
48:Cp:11:VAL:HG22	48:Cp:31:VAL:HB	2.03	0.40
50:C1:208:A:O2'	50:C1:209:A:O4'	2.31	0.40
50:C1:924:A:H5''	52:CW:134:ARG:NH2	2.36	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:UT:47:ARG:O	53:UT:49:HIS:N	2.54	0.40
53:UT:1391:ILE:HG21	53:UT:1433:PRO:HB2	2.02	0.40
53:UT:1585:PHE:HE1	53:UT:1636:ARG:HH12	1.69	0.40
61:UP:345:ALA:HA	61:UP:348:ARG:HG2	2.02	0.40
2:UB:730:THR:OG1	2:UB:780:LEU:HD22	2.21	0.40
3:UC:608:TYR:CG	40:Cg:30:GLY:HA3	2.56	0.40
4:UD:431:ILE:HD13	4:UD:447:THR:HG22	2.03	0.40
4:UD:838:ILE:HA	4:UD:861:ALA:O	2.21	0.40
7:UJ:247:LEU:O	7:UJ:251:ILE:HG12	2.21	0.40
7:UJ:979:LEU:HD12	7:UJ:979:LEU:HA	1.97	0.40
7:UJ:1437:TYR:CZ	7:UJ:1438:LEU:HB2	2.57	0.40
7:UJ:1521:SER:O	7:UJ:1524:SER:OG	2.24	0.40
13:UQ:251:ARG:HD3	13:UQ:251:ARG:HA	1.86	0.40
13:UQ:568:THR:HG22	55:UE:262:LYS:NZ	2.37	0.40
15:UU:666:THR:OG1	15:UU:667:LYS:N	2.53	0.40
22:CG:470:ARG:HD3	22:CG:471:THR:N	2.37	0.40
27:CL:48:ILE:HG23	27:CL:77:LEU:HD11	2.02	0.40
31:CQ:205:THR:HG23	31:CQ:248:LEU:HD21	2.02	0.40
32:CR:652:LYS:HA	32:CR:652:LYS:HD2	1.91	0.40
32:CR:864:LEU:HB2	32:CR:869:ARG:HB3	2.04	0.40
35:Cb:173:ILE:HD12	35:Cb:230:SER:HB3	2.03	0.40
37:Cd:154:ARG:CZ	37:Cd:181:LEU:HD11	2.52	0.40
50:C1:134:C:H41	50:C1:203:C:H42	1.68	0.40
50:C1:1479:U:H2'	50:C1:1480:G:C8	2.57	0.40
52:CW:140:ARG:HD3	52:CW:156:VAL:HG13	2.02	0.40
53:UT:559:LEU:HD11	53:UT:582:PHE:HA	2.01	0.40
54:UH:548:TYR:CE2	54:UH:552:LYS:HE2	2.56	0.40
56:US:463:LEU:HA	56:US:466:HIS:HB2	2.03	0.40
56:US:474:ILE:O	56:US:477:ILE:HG12	2.21	0.40
59:CY:365:LYS:HA	59:CY:368:LYS:HG2	2.02	0.40
1:UA:354:ARG:HA	1:UA:367:TRP:O	2.20	0.40
8:UK:250:THR:OG1	8:UK:269:LYS:NZ	2.36	0.40
9:UL:830:VAL:HA	9:UL:833:THR:HG22	2.02	0.40
12:UO:112:ARG:HH12	36:Cc:32:ARG:HH12	1.70	0.40
12:UO:475:GLU:O	12:UO:479:ILE:HG12	2.21	0.40
13:UQ:286:VAL:HG21	13:UQ:290:ILE:HD11	2.02	0.40
13:UQ:481:CYS:SG	13:UQ:541:LEU:HD13	2.61	0.40
18:CB:106:GLU:OE2	18:CB:128:ARG:NH1	2.54	0.40
18:CB:250:GLY:CA	18:CB:306:TYR:O	2.69	0.40
25:CJ:174:ARG:HH21	25:CJ:176:LYS:HD3	1.86	0.40
27:CL:124:ALA:HA	27:CL:125:LEU:HA	1.85	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:CM:79:LEU:HD12	28:CM:336:MET:HB2	2.04	0.40
29:CN:100:LEU:HA	29:CN:105:ASN:ND2	2.33	0.40
32:CS:512:ASP:HB3	32:CS:515:GLN:HG3	2.03	0.40
39:Cf:56:ARG:HH22	50:C1:916:U:P	2.42	0.40
39:Cf:99:SER:HA	39:Cf:173:ILE:O	2.22	0.40
40:Cg:108:GLN:NE2	40:Cg:120:ILE:HG13	2.36	0.40
40:Cg:108:GLN:NE2	40:Cg:124:ARG:HB2	2.37	0.40
44:Ck:62:LYS:NZ	50:C1:910:G:OP1	2.52	0.40
50:C1:333:C:H2'	50:C1:334:U:O4'	2.22	0.40
50:C1:771:G:O2'	50:C1:772:A:O5'	2.30	0.40
54:UH:19:PRO:HD3	54:UH:29:TYR:CZ	2.57	0.40
54:UH:605:VAL:O	54:UH:609:ILE:HG12	2.21	0.40
54:UH:742:LEU:HD23	54:UH:742:LEU:HA	1.88	0.40
56:US:196:ILE:O	56:US:200:THR:OG1	2.32	0.40
1:UA:558:ARG:HA	1:UA:558:ARG:HD2	1.84	0.40
1:UA:620:GLY:H	1:UA:673:VAL:HG23	1.87	0.40
4:UD:474:MET:HE1	4:UD:495:TRP:CZ3	2.56	0.40
6:UG:118:VAL:HA	6:UG:121:VAL:HG12	2.02	0.40
7:UJ:584:CYS:HB2	7:UJ:589:PHE:HZ	1.87	0.40
9:UL:394:LEU:HB2	9:UL:420:VAL:HB	2.03	0.40
10:UM:135:ILE:HB	10:UM:149:VAL:O	2.21	0.40
11:UN:346:ASN:ND2	11:UN:932:PRO:O	2.50	0.40
13:UQ:265:ILE:HD13	13:UQ:330:LEU:HD21	2.03	0.40
15:UU:626:THR:N	15:UU:640:CYS:O	2.50	0.40
19:CC:326:THR:HA	19:CC:394:ASN:ND2	2.36	0.40
20:CD:12:GLY:HA3	20:CD:49:ALA:O	2.21	0.40
21:CF:103:LEU:HD23	21:CF:115:ILE:HD11	2.02	0.40
22:CG:245:HIS:CE1	22:CG:271:VAL:HG12	2.57	0.40
23:CH:229:ALA:HA	23:CH:232:ASN:ND2	2.36	0.40
24:CI:536:PRO:HB2	24:CI:537:TRP:CD1	2.51	0.40
24:CI:1102:LYS:HG3	50:C1:400:C:H5''	2.04	0.40
32:CR:280:THR:HA	32:CR:408:VAL:O	2.21	0.40
32:CR:287:ARG:HH11	32:CR:413:THR:HG22	1.86	0.40
32:CR:530:HIS:O	32:CR:533:SER:OG	2.35	0.40
32:CR:845:ALA:HB2	32:CR:920:THR:HG21	2.04	0.40
50:C1:1266:G:H2'	50:C1:1267:G:H8	1.87	0.40
50:C1:1625:G:N2	50:C1:1663:U:O2	2.54	0.40
53:UT:1470:TRP:CE3	53:UT:1475:GLN:HG2	2.56	0.40
54:UH:88:ARG:NH2	54:UH:90:ARG:HH21	2.20	0.40
54:UH:556:TRP:CE2	54:UH:565:GLY:HA3	2.56	0.40
60:CZ:273:SER:OG	60:CZ:276:GLU:OE2	2.38	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:UI:237:ASN:O	55:UI:240:THR:OG1	2.34	0.40
4:UD:322:HIS:NE2	4:UD:342:SER:OG	2.45	0.40
7:UJ:267:ILE:HD13	7:UJ:267:ILE:HA	1.94	0.40
7:UJ:524:ALA:HB1	7:UJ:530:ASP:HB3	2.03	0.40
7:UJ:1085:ALA:O	7:UJ:1089:ILE:HG12	2.21	0.40
7:UJ:1312:LEU:HA	7:UJ:1315:VAL:HG12	2.03	0.40
7:UJ:1317:ARG:NH1	7:UJ:1353:THR:HB	2.37	0.40
7:UJ:1364:SER:O	7:UJ:1368:ARG:HG2	2.21	0.40
9:UL:221:TRP:NE1	9:UL:237:ASN:HB3	2.34	0.40
10:UM:558:LEU:HA	10:UM:571:TRP:O	2.22	0.40
10:UM:823:ALA:O	10:UM:827:GLN:HB2	2.21	0.40
14:UR:53:GLU:O	14:UR:57:LYS:HG2	2.21	0.40
14:UR:232:SER:HA	14:UR:235:ARG:HG2	2.03	0.40
18:CB:118:PRO:HA	51:C2:243:G:H5''	2.02	0.40
20:CD:82:ASP:OD1	20:CD:83:GLU:N	2.54	0.40
21:CE:54:ILE:HB	21:CE:101:VAL:HG22	2.04	0.40
23:CH:29:ARG:NH1	23:CH:370:PHE:O	2.54	0.40
23:CH:235:MET:HB3	23:CH:279:LEU:HD22	2.03	0.40
26:CK:100:LEU:HD13	26:CK:144:GLU:HB3	2.04	0.40
27:CL:641:LYS:HD3	27:CL:642:PRO:HD2	2.04	0.40
29:CO:99:LEU:HD23	29:CO:99:LEU:HA	1.93	0.40
32:CS:893:ASP:OD1	32:CS:894:ILE:N	2.55	0.40
36:Cc:84:LEU:HD11	36:Cc:181:LEU:HD22	2.04	0.40
39:Cf:25:ARG:HA	39:Cf:25:ARG:HD3	1.81	0.40
47:Co:342:LYS:O	47:Co:354:MET:HA	2.21	0.40
47:Co:413:LEU:O	47:Co:417:GLU:CB	2.70	0.40
50:C1:1268:C:H2'	50:C1:1269:U:C6	2.57	0.40
51:C2:135:U:H4'	51:C2:136:C:H4'	2.03	0.40
53:UT:753:MET:HE2	53:UT:753:MET:HB3	1.91	0.40

There are no symmetry-related clashes.

5.3 Torsion angles ⓘ

5.3.1 Protein backbone ⓘ

In the following table, the Percentiles column shows the percent Ramachandran outliers of the chain as a percentile score with respect to all PDB entries followed by that with respect to all EM entries.

The Analysed column shows the number of residues for which the backbone conformation was analysed, and the total number of residues.

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	UA	834/904 (92%)	800 (96%)	34 (4%)	0	100	100
2	UB	556/907 (61%)	531 (96%)	25 (4%)	0	100	100
3	UC	242/648 (37%)	232 (96%)	10 (4%)	0	100	100
4	UD	761/884 (86%)	731 (96%)	30 (4%)	0	100	100
5	UF	325/414 (78%)	315 (97%)	10 (3%)	0	100	100
6	UG	475/558 (85%)	452 (95%)	22 (5%)	1 (0%)	43	73
7	UJ	1620/1802 (90%)	1532 (95%)	81 (5%)	7 (0%)	30	61
8	UK	211/270 (78%)	207 (98%)	4 (2%)	0	100	100
9	UL	767/962 (80%)	714 (93%)	53 (7%)	0	100	100
10	UM	835/912 (92%)	789 (94%)	45 (5%)	1 (0%)	48	78
11	UN	171/633 (27%)	169 (99%)	2 (1%)	0	100	100
12	UO	497/557 (89%)	475 (96%)	21 (4%)	1 (0%)	43	73
13	UQ	775/960 (81%)	724 (93%)	49 (6%)	2 (0%)	36	67
14	UR	436/618 (71%)	423 (97%)	13 (3%)	0	100	100
15	UU	896/1049 (85%)	847 (94%)	47 (5%)	2 (0%)	43	73
16	UX	188/193 (97%)	177 (94%)	11 (6%)	0	100	100
17	UZ	229/391 (59%)	218 (95%)	11 (5%)	0	100	100
18	CA	238/313 (76%)	225 (94%)	13 (6%)	0	100	100
18	CB	235/313 (75%)	226 (96%)	9 (4%)	0	100	100
19	CC	383/523 (73%)	364 (95%)	18 (5%)	1 (0%)	36	67
20	CD	444/582 (76%)	430 (97%)	14 (3%)	0	100	100
21	CE	119/127 (94%)	116 (98%)	3 (2%)	0	100	100
21	CF	118/127 (93%)	112 (95%)	6 (5%)	0	100	100
22	CG	402/630 (64%)	390 (97%)	12 (3%)	0	100	100
23	CH	383/411 (93%)	375 (98%)	8 (2%)	0	100	100
24	CI	829/1163 (71%)	805 (97%)	23 (3%)	1 (0%)	48	78
25	CJ	177/183 (97%)	177 (100%)	0	0	100	100
26	CK	295/297 (99%)	285 (97%)	10 (3%)	0	100	100
27	CL	310/720 (43%)	294 (95%)	15 (5%)	1 (0%)	36	67
28	CM	443/446 (99%)	422 (95%)	21 (5%)	0	100	100
29	CN	222/252 (88%)	212 (96%)	10 (4%)	0	100	100
29	CO	211/252 (84%)	199 (94%)	11 (5%)	1 (0%)	24	57

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
30	CP	227/322 (70%)	220 (97%)	7 (3%)	0	100	100
31	CQ	178/259 (69%)	172 (97%)	6 (3%)	0	100	100
32	CR	836/1073 (78%)	793 (95%)	42 (5%)	1 (0%)	48	78
32	CS	826/1073 (77%)	784 (95%)	42 (5%)	0	100	100
33	CT	127/203 (63%)	120 (94%)	7 (6%)	0	100	100
34	Ca	223/255 (88%)	210 (94%)	12 (5%)	1 (0%)	30	61
35	Cb	230/264 (87%)	216 (94%)	14 (6%)	0	100	100
36	Cc	188/212 (89%)	180 (96%)	8 (4%)	0	100	100
37	Cd	224/239 (94%)	214 (96%)	10 (4%)	0	100	100
38	Ce	155/203 (76%)	139 (90%)	16 (10%)	0	100	100
39	Cf	170/202 (84%)	168 (99%)	2 (1%)	0	100	100
40	Cg	157/190 (83%)	155 (99%)	2 (1%)	0	100	100
41	Ch	64/151 (42%)	63 (98%)	1 (2%)	0	100	100
42	Ci	113/150 (75%)	109 (96%)	4 (4%)	0	100	100
43	Cj	124/143 (87%)	119 (96%)	5 (4%)	0	100	100
44	Ck	127/161 (79%)	121 (95%)	6 (5%)	0	100	100
45	Cm	122/130 (94%)	114 (93%)	8 (7%)	0	100	100
46	Cn	92/145 (63%)	90 (98%)	2 (2%)	0	100	100
47	Co	90/136 (66%)	83 (92%)	6 (7%)	1 (1%)	11	39
48	Cp	59/68 (87%)	56 (95%)	3 (5%)	0	100	100
49	CU	168/311 (54%)	161 (96%)	7 (4%)	0	100	100
52	CW	381/668 (57%)	353 (93%)	28 (7%)	0	100	100
53	UT	1981/2612 (76%)	1873 (94%)	104 (5%)	4 (0%)	43	73
54	UH	787/930 (85%)	752 (96%)	29 (4%)	6 (1%)	16	47
55	UE	172/410 (42%)	156 (91%)	16 (9%)	0	100	100
55	UI	126/410 (31%)	120 (95%)	6 (5%)	0	100	100
56	US	443/549 (81%)	424 (96%)	18 (4%)	1 (0%)	43	73
57	Cl	78/156 (50%)	71 (91%)	7 (9%)	0	100	100
58	CX	265/480 (55%)	250 (94%)	15 (6%)	0	100	100
59	CY	258/381 (68%)	251 (97%)	7 (3%)	0	100	100
60	CZ	279/609 (46%)	268 (96%)	11 (4%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
61	UP	52/364 (14%)	50 (96%)	2 (4%)	0	100	100
All	All	23949/32460 (74%)	22823 (95%)	1094 (5%)	32 (0%)	49	78

All (32) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
7	UJ	1428	HIS
7	UJ	1430	PRO
32	CR	211	ILE
34	Ca	55	LYS
13	UQ	171	THR
13	UQ	697	GLY
53	UT	48	ARG
54	UH	304	SER
54	UH	384	THR
54	UH	386	GLY
56	US	241	GLU
6	UG	56	PRO
7	UJ	1019	PRO
7	UJ	1260	SER
12	UO	130	GLN
15	UU	398	PHE
53	UT	1567	PHE
54	UH	159	ASN
54	UH	754	ARG
15	UU	837	SER
19	CC	247	ASP
7	UJ	1072	VAL
10	UM	383	LEU
24	CI	367	VAL
27	CL	640	PRO
53	UT	28	GLU
47	Co	367	SER
54	UH	206	SER
7	UJ	1298	ASP
7	UJ	1022	VAL
53	UT	1445	PRO
29	CO	165	ASN

5.3.2 Protein sidechains ⓘ

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all PDB entries followed by that with respect to all EM entries.

The Analysed column shows the number of residues for which the sidechain conformation was analysed, and the total number of residues.

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	UA	662/774 (86%)	662 (100%)	0	100	100
2	UB	474/788 (60%)	473 (100%)	1 (0%)	87	89
3	UC	208/536 (39%)	200 (96%)	8 (4%)	29	60
4	UD	657/738 (89%)	657 (100%)	0	100	100
5	UF	250/341 (73%)	250 (100%)	0	100	100
6	UG	386/474 (81%)	386 (100%)	0	100	100
7	UJ	1379/1526 (90%)	1369 (99%)	10 (1%)	76	82
8	UK	161/227 (71%)	161 (100%)	0	100	100
9	UL	667/821 (81%)	667 (100%)	0	100	100
10	UM	712/770 (92%)	710 (100%)	2 (0%)	86	87
11	UN	146/522 (28%)	146 (100%)	0	100	100
12	UO	403/456 (88%)	402 (100%)	1 (0%)	87	89
13	UQ	650/817 (80%)	641 (99%)	9 (1%)	59	76
14	UR	359/523 (69%)	359 (100%)	0	100	100
15	UU	677/863 (78%)	677 (100%)	0	100	100
16	UX	152/167 (91%)	152 (100%)	0	100	100
17	UZ	186/329 (56%)	186 (100%)	0	100	100
18	CA	175/228 (77%)	175 (100%)	0	100	100
18	CB	195/228 (86%)	195 (100%)	0	100	100
19	CC	287/435 (66%)	287 (100%)	0	100	100
20	CD	344/489 (70%)	344 (100%)	0	100	100
21	CE	91/108 (84%)	91 (100%)	0	100	100
21	CF	88/108 (82%)	88 (100%)	0	100	100
22	CG	331/525 (63%)	331 (100%)	0	100	100
23	CH	303/320 (95%)	302 (100%)	1 (0%)	86	87
24	CI	681/1009 (68%)	680 (100%)	1 (0%)	88	90

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
25	CJ	147/169 (87%)	147 (100%)	0	100	100
26	CK	245/266 (92%)	245 (100%)	0	100	100
27	CL	251/588 (43%)	251 (100%)	0	100	100
28	CM	364/383 (95%)	364 (100%)	0	100	100
29	CN	202/223 (91%)	201 (100%)	1 (0%)	81	85
29	CO	193/223 (86%)	192 (100%)	1 (0%)	81	85
30	CP	202/287 (70%)	202 (100%)	0	100	100
31	CQ	151/215 (70%)	151 (100%)	0	100	100
32	CR	731/916 (80%)	731 (100%)	0	100	100
32	CS	722/916 (79%)	721 (100%)	1 (0%)	88	90
33	CT	108/167 (65%)	108 (100%)	0	100	100
34	Ca	198/223 (89%)	198 (100%)	0	100	100
35	Cb	199/221 (90%)	199 (100%)	0	100	100
36	Cc	149/178 (84%)	149 (100%)	0	100	100
37	Cd	192/204 (94%)	192 (100%)	0	100	100
38	Ce	137/177 (77%)	137 (100%)	0	100	100
39	Cf	139/164 (85%)	139 (100%)	0	100	100
40	Cg	123/162 (76%)	123 (100%)	0	100	100
41	Ch	58/130 (45%)	58 (100%)	0	100	100
42	Ci	78/117 (67%)	78 (100%)	0	100	100
43	Cj	92/115 (80%)	92 (100%)	0	100	100
44	Ck	117/143 (82%)	116 (99%)	1 (1%)	70	80
45	Cm	103/113 (91%)	103 (100%)	0	100	100
46	Cn	70/116 (60%)	70 (100%)	0	100	100
47	Co	79/115 (69%)	79 (100%)	0	100	100
48	Cp	47/61 (77%)	47 (100%)	0	100	100
49	CU	137/260 (53%)	137 (100%)	0	100	100
52	CW	310/587 (53%)	310 (100%)	0	100	100
53	UT	1725/2276 (76%)	1725 (100%)	0	100	100
54	UH	674/788 (86%)	664 (98%)	10 (2%)	57	75
55	UE	148/346 (43%)	148 (100%)	0	100	100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
55	UI	108/346 (31%)	108 (100%)	0	100	100
56	US	404/493 (82%)	402 (100%)	2 (0%)	81	85
57	CI	71/135 (53%)	71 (100%)	0	100	100
58	CX	227/411 (55%)	227 (100%)	0	100	100
59	CY	225/322 (70%)	225 (100%)	0	100	100
60	CZ	238/519 (46%)	238 (100%)	0	100	100
61	UP	44/314 (14%)	44 (100%)	0	100	100
All	All	20032/27511 (73%)	19983 (100%)	49 (0%)	85	89

All (49) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
2	UB	22	GLN
3	UC	469	GLN
3	UC	473	ARG
3	UC	478	ASP
3	UC	479	MET
3	UC	481	ILE
3	UC	482	PRO
3	UC	484	ARG
3	UC	488	LYS
7	UJ	867	HIS
7	UJ	1014	LEU
7	UJ	1020	ASP
7	UJ	1023	LEU
7	UJ	1037	VAL
7	UJ	1261	ILE
7	UJ	1263	GLU
7	UJ	1321	ASP
7	UJ	1322	MET
7	UJ	1325	LYS
10	UM	394	ASN
10	UM	827	GLN
12	UO	70	ASN
13	UQ	414	HIS
13	UQ	695	GLU
13	UQ	696	ASP
13	UQ	699	ILE
13	UQ	715	ILE
13	UQ	725	VAL

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Mol	Chain	Res	Type
13	UQ	726	VAL
13	UQ	753	VAL
13	UQ	758	SER
23	CH	269	GLN
24	CI	612	ASN
29	CN	130	ILE
29	CO	79	LYS
32	CS	655	GLN
44	Ck	111	ASN
54	UH	429	LEU
54	UH	431	THR
54	UH	432	ASP
54	UH	434	ILE
54	UH	436	ARG
54	UH	438	ILE
54	UH	588	THR
54	UH	596	LYS
54	UH	597	ASP
54	UH	601	GLU
56	US	489	LEU
56	US	490	GLU

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (214) such sidechains are listed below:

Mol	Chain	Res	Type
1	UA	156	HIS
1	UA	328	GLN
1	UA	381	HIS
1	UA	543	GLN
1	UA	568	ASN
1	UA	846	ASN
2	UB	56	ASN
2	UB	505	GLN
2	UB	557	HIS
2	UB	701	GLN
2	UB	768	HIS
2	UB	783	HIS
2	UB	789	GLN
2	UB	802	HIS
2	UB	863	GLN
3	UC	491	GLN
4	UD	37	GLN

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Mol	Chain	Res	Type
4	UD	128	GLN
4	UD	389	ASN
4	UD	455	HIS
4	UD	536	HIS
4	UD	714	GLN
4	UD	755	GLN
4	UD	801	GLN
4	UD	807	ASN
5	UF	59	ASN
5	UF	319	HIS
6	UG	47	GLN
6	UG	228	HIS
6	UG	239	GLN
6	UG	363	HIS
6	UG	391	GLN
6	UG	393	GLN
7	UJ	77	GLN
7	UJ	91	ASN
7	UJ	103	HIS
7	UJ	158	GLN
7	UJ	268	GLN
7	UJ	295	GLN
7	UJ	350	GLN
7	UJ	404	HIS
7	UJ	909	GLN
7	UJ	1254	ASN
7	UJ	1667	GLN
7	UJ	1745	GLN
7	UJ	1746	GLN
8	UK	23	GLN
9	UL	107	ASN
9	UL	688	GLN
9	UL	870	ASN
9	UL	886	HIS
9	UL	930	GLN
10	UM	160	HIS
10	UM	274	HIS
10	UM	520	GLN
10	UM	628	ASN
10	UM	741	GLN
10	UM	827	GLN
10	UM	857	ASN

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Mol	Chain	Res	Type
11	UN	338	HIS
11	UN	362	GLN
11	UN	927	GLN
12	UO	33	GLN
12	UO	46	HIS
12	UO	70	ASN
12	UO	145	GLN
12	UO	203	ASN
12	UO	271	ASN
12	UO	339	GLN
12	UO	480	ASN
12	UO	531	ASN
13	UQ	98	GLN
13	UQ	473	GLN
13	UQ	501	GLN
13	UQ	718	GLN
14	UR	69	GLN
14	UR	402	ASN
14	UR	440	GLN
14	UR	472	ASN
14	UR	493	ASN
15	UU	236	GLN
15	UU	473	ASN
15	UU	577	GLN
15	UU	711	ASN
15	UU	758	HIS
15	UU	784	HIS
15	UU	969	ASN
16	UX	57	ASN
16	UX	141	HIS
17	UZ	150	HIS
17	UZ	161	ASN
17	UZ	273	GLN
18	CA	235	GLN
18	CA	270	GLN
18	CA	277	GLN
18	CA	289	GLN
18	CB	277	GLN
19	CC	85	ASN
19	CC	272	GLN
20	CD	147	HIS
20	CD	180	ASN

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Mol	Chain	Res	Type
21	CE	67	HIS
21	CF	33	GLN
22	CG	424	GLN
23	CH	177	GLN
24	CI	287	HIS
24	CI	374	GLN
24	CI	749	GLN
24	CI	1011	GLN
24	CI	1063	GLN
26	CK	169	ASN
27	CL	88	GLN
27	CL	662	GLN
27	CL	667	GLN
28	CM	60	GLN
28	CM	77	ASN
28	CM	230	ASN
28	CM	263	ASN
28	CM	368	GLN
28	CM	421	ASN
29	CN	18	GLN
29	CN	105	ASN
29	CN	170	HIS
31	CQ	240	GLN
32	CR	134	ASN
32	CR	353	ASN
32	CR	557	GLN
32	CR	655	GLN
32	CR	734	HIS
32	CR	741	GLN
32	CR	819	ASN
32	CS	17	ASN
32	CS	102	ASN
32	CS	134	ASN
32	CS	186	ASN
32	CS	319	ASN
32	CS	378	HIS
32	CS	431	GLN
32	CS	539	GLN
32	CS	554	ASN
32	CS	565	HIS
32	CS	623	GLN
32	CS	732	GLN

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Mol	Chain	Res	Type
32	CS	741	GLN
32	CS	783	HIS
32	CS	907	GLN
34	Ca	79	HIS
34	Ca	101	HIS
34	Ca	132	HIS
34	Ca	149	GLN
34	Ca	182	HIS
34	Ca	208	GLN
34	Ca	220	GLN
35	Cb	98	ASN
35	Cb	142	HIS
36	Cc	50	GLN
36	Cc	109	HIS
37	Cd	71	ASN
37	Cd	116	GLN
37	Cd	189	HIS
37	Cd	213	GLN
38	Ce	77	HIS
38	Ce	132	HIS
38	Ce	197	GLN
39	Cf	13	HIS
39	Cf	44	HIS
39	Cf	84	HIS
40	Cg	131	HIS
40	Cg	137	GLN
43	Cj	100	HIS
43	Cj	107	GLN
44	Ck	132	GLN
46	Cn	48	HIS
47	Co	353	GLN
48	Cp	44	ASN
49	CU	162	GLN
49	CU	251	ASN
53	UT	49	HIS
53	UT	74	ASN
53	UT	202	HIS
53	UT	247	GLN
53	UT	334	GLN
53	UT	436	GLN
53	UT	625	GLN
53	UT	780	GLN

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Mol	Chain	Res	Type
53	UT	792	ASN
53	UT	1081	ASN
53	UT	1104	ASN
53	UT	1146	GLN
53	UT	1248	ASN
53	UT	1314	ASN
53	UT	1315	GLN
53	UT	1345	GLN
53	UT	1366	GLN
53	UT	1386	GLN
53	UT	1416	ASN
53	UT	1437	ASN
53	UT	1782	GLN
53	UT	2023	ASN
54	UH	232	ASN
54	UH	315	GLN
54	UH	329	ASN
54	UH	373	GLN
54	UH	816	GLN
55	UE	158	ASN
56	US	253	HIS
56	US	462	GLN
56	US	464	GLN
56	US	488	ASN
57	CI	13	HIS
58	CX	263	GLN
59	CY	364	GLN
60	CZ	554	ASN
55	UI	237	ASN

5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
50	C1	1549/2344 (66%)	354 (22%)	23 (1%)
51	C2	225/274 (82%)	57 (25%)	2 (0%)
All	All	1774/2618 (67%)	411 (23%)	25 (1%)

All (411) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
50	C1	4	G

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Mol	Chain	Res	Type
50	C1	5	G
50	C1	7	A
50	C1	14	G
50	C1	16	U
50	C1	17	C
50	C1	18	G
50	C1	19	C
50	C1	26	C
50	C1	40	A
50	C1	41	G
50	C1	59	U
50	C1	60	A
50	C1	61	G
50	C1	71	A
50	C1	72	U
50	C1	73	A
50	C1	77	C
50	C1	78	G
50	C1	86	C
50	C1	90	A
50	C1	93	G
50	C1	96	C
50	C1	97	C
50	C1	104	U
50	C1	105	A
50	C1	121	G
50	C1	126	C
50	C1	127	C
50	C1	128	G
50	C1	134	C
50	C1	136	C
50	C1	143	A
50	C1	150	C
50	C1	152	G
50	C1	155	G
50	C1	158	C
50	C1	159	C
50	C1	162	G
50	C1	166	A
50	C1	169	G
50	C1	182	C
50	C1	183	C

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Mol	Chain	Res	Type
50	C1	193	U
50	C1	203	C
50	C1	206	C
50	C1	207	U
50	C1	209	A
50	C1	210	G
50	C1	211	G
50	C1	225	C
50	C1	234	G
50	C1	236	C
50	C1	242	U
50	C1	243	U
50	C1	244	G
50	C1	257	G
50	C1	258	C
50	C1	259	U
50	C1	265	G
50	C1	266	C
50	C1	267	U
50	C1	268	G
50	C1	269	G
50	C1	273	G
50	C1	276	C
50	C1	277	U
50	C1	278	A
50	C1	281	U
50	C1	282	C
50	C1	283	A
50	C1	285	A
50	C1	291	C
50	C1	292	G
50	C1	295	G
50	C1	308	U
50	C1	309	G
50	C1	310	G
50	C1	312	G
50	C1	319	U
50	C1	320	A
50	C1	323	G
50	C1	326	U
50	C1	333	C
50	C1	346	C

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Mol	Chain	Res	Type
50	C1	347	C
50	C1	349	C
50	C1	351	U
50	C1	382	U
50	C1	383	G
50	C1	384	C
50	C1	386	G
50	C1	398	C
50	C1	402	U
50	C1	403	G
50	C1	416	U
50	C1	435	A
50	C1	436	A
50	C1	440	G
50	C1	441	A
50	C1	443	G
50	C1	454	C
50	C1	459	C
50	C1	465	C
50	C1	466	A
50	C1	468	C
50	C1	469	G
50	C1	472	G
50	C1	483	U
50	C1	484	G
50	C1	491	G
50	C1	492	C
50	C1	499	G
50	C1	500	C
50	C1	501	U
50	C1	502	A
50	C1	583	A
50	C1	584	U
50	C1	587	U
50	C1	589	A
50	C1	594	G
50	C1	597	G
50	C1	609	A
50	C1	613	A
50	C1	614	U
50	C1	621	G
50	C1	628	A

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Mol	Chain	Res	Type
50	C1	636	C
50	C1	638	A
50	C1	650	G
50	C1	653	U
50	C1	655	A
50	C1	658	A
50	C1	662	A
50	C1	663	U
50	C1	664	A
50	C1	678	A
50	C1	680	U
50	C1	681	G
50	C1	685	C
50	C1	686	A
50	C1	690	A
50	C1	691	A
50	C1	700	C
50	C1	701	G
50	C1	702	U
50	C1	712	A
50	C1	715	A
50	C1	719	U
50	C1	720	A
50	C1	721	C
50	C1	723	A
50	C1	725	A
50	C1	737	G
50	C1	742	U
50	C1	743	U
50	C1	744	C
50	C1	755	A
50	C1	760	C
50	C1	762	G
50	C1	763	A
50	C1	764	A
50	C1	772	A
50	C1	775	U
50	C1	776	C
50	C1	777	G
50	C1	786	G
50	C1	798	U
50	C1	801	A

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Mol	Chain	Res	Type
50	C1	802	A
50	C1	803	A
50	C1	806	C
50	C1	807	A
50	C1	808	A
50	C1	810	G
50	C1	816	C
50	C1	833	U
50	C1	834	C
50	C1	841	A
50	C1	845	C
50	C1	849	A
50	C1	861	U
50	C1	863	G
50	C1	871	G
50	C1	897	U
50	C1	900	A
50	C1	904	U
50	C1	913	G
50	C1	921	G
50	C1	922	C
50	C1	934	A
50	C1	936	A
50	C1	942	U
50	C1	943	A
50	C1	972	A
50	C1	974	G
50	C1	984	A
50	C1	985	A
50	C1	986	C
50	C1	1000	A
50	C1	1001	A
50	C1	1002	G
50	C1	1005	A
50	C1	1007	G
50	C1	1017	C
50	C1	1018	G
50	C1	1023	U
50	C1	1024	U
50	C1	1025	A
50	C1	1027	C
50	C1	1028	C

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Mol	Chain	Res	Type
50	C1	1037	C
50	C1	1039	C
50	C1	1043	G
50	C1	1044	A
50	C1	1052	A
50	C1	1061	A
50	C1	1069	A
50	C1	1076	U
50	C1	1077	U
50	C1	1078	U
50	C1	1079	C
50	C1	1080	G
50	C1	1085	U
50	C1	1086	U
50	C1	1088	U
50	C1	1089	A
50	C1	1094	G
50	C1	1096	A
50	C1	1098	G
50	C1	1099	A
50	C1	1103	C
50	C1	1111	A
50	C1	1116	U
50	C1	1122	A
50	C1	1123	G
50	C1	1124	G
50	C1	1125	A
50	C1	1126	A
50	C1	1129	A
50	C1	1138	C
50	C1	1141	G
50	C1	1147	U
50	C1	1148	G
50	C1	1149	C
50	C1	1154	A
50	C1	1156	C
50	C1	1158	G
50	C1	1159	C
50	C1	1163	A
50	C1	1164	A
50	C1	1166	U
50	C1	1167	C

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Mol	Chain	Res	Type
50	C1	1168	C
50	C1	1169	A
50	C1	1170	G
50	C1	1178	A
50	C1	1179	G
50	C1	1218	G
50	C1	1219	A
50	C1	1222	C
50	C1	1223	U
50	C1	1240	G
50	C1	1254	G
50	C1	1255	U
50	C1	1256	G
50	C1	1257	C
50	C1	1259	C
50	C1	1265	G
50	C1	1444	A
50	C1	1447	A
50	C1	1448	A
50	C1	1449	U
50	C1	1458	U
50	C1	1461	G
50	C1	1466	G
50	C1	1471	U
50	C1	1481	U
50	C1	1483	A
50	C1	1491	A
50	C1	1497	U
50	C1	1498	G
50	C1	1499	G
50	C1	1511	A
50	C1	1518	A
50	C1	1519	C
50	C1	1520	U
50	C1	1527	G
50	C1	1529	A
50	C1	1544	U
50	C1	1551	A
50	C1	1555	A
50	C1	1613	C
50	C1	1614	U
50	C1	1624	A

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Mol	Chain	Res	Type
50	C1	1625	G
50	C1	1628	A
50	C1	1632	G
50	C1	1642	A
50	C1	1643	U
50	C1	1645	U
50	C1	1656	C
50	C1	1665	A
50	C1	1667	G
50	C1	1668	A
50	C1	1670	A
50	C1	1710	G
50	C1	1711	G
50	C1	1712	C
50	C1	1713	U
50	C1	1735	A
50	C1	1742	C
50	C1	1744	A
50	C1	1748	G
50	C1	2055	C
50	C1	2056	U
50	C1	2070	A
50	C1	2071	G
50	C1	2072	U
50	C1	2074	C
50	C1	2076	C
50	C1	2078	C
50	C1	2085	G
50	C1	2086	A
50	C1	2087	G
50	C1	2088	A
50	C1	2107	A
50	C1	2118	U
50	C1	2119	G
50	C1	2120	C
50	C1	2121	U
50	C1	2156	A
50	C1	2157	G
50	C1	2167	G
50	C1	2173	G
50	C1	2177	G
50	C1	2178	U

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Mol	Chain	Res	Type
50	C1	2184	G
50	C1	2185	C
50	C1	2190	G
50	C1	2197	A
50	C1	2201	C
50	C1	2205	G
50	C1	2214	A
50	C1	2220	C
50	C1	2222	C
50	C1	2227	C
50	C1	2234	A
50	C1	2351	G
50	C1	2362	U
50	C1	2363	G
50	C1	2364	A
50	C1	2373	A
50	C1	2374	G
51	C2	15	A
51	C2	24	U
51	C2	28	U
51	C2	29	A
51	C2	31	A
51	C2	33	U
51	C2	34	A
51	C2	37	U
51	C2	39	U
51	C2	48	G
51	C2	58	A
51	C2	62	A
51	C2	63	G
51	C2	82	U
51	C2	84	G
51	C2	89	A
51	C2	90	C
51	C2	91	G
51	C2	92	A
51	C2	93	G
51	C2	103	G
51	C2	104	C
51	C2	111	G
51	C2	125	U
51	C2	126	U

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Mol	Chain	Res	Type
51	C2	127	A
51	C2	128	C
51	C2	135	U
51	C2	136	C
51	C2	142	G
51	C2	153	G
51	C2	160	U
51	C2	162	C
51	C2	163	C
51	C2	164	U
51	C2	165	C
51	C2	166	G
51	C2	167	U
51	C2	170	C
51	C2	178	U
51	C2	179	A
51	C2	181	A
51	C2	182	G
51	C2	187	U
51	C2	188	G
51	C2	189	G
51	C2	190	C
51	C2	199	G
51	C2	200	U
51	C2	201	A
51	C2	244	G
51	C2	247	G
51	C2	255	U
51	C2	256	G
51	C2	259	A
51	C2	260	G
51	C2	262	C

All (25) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
50	C1	89	G
50	C1	135	A
50	C1	150	C
50	C1	209	A
50	C1	277	U
50	C1	281	U

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Mol	Chain	Res	Type
50	C1	319	U
50	C1	397	U
50	C1	593	G
50	C1	684	U
50	C1	689	A
50	C1	771	G
50	C1	802	A
50	C1	1001	A
50	C1	1017	C
50	C1	1068	C
50	C1	1087	G
50	C1	1163	A
50	C1	1712	C
50	C1	1734	G
50	C1	2156	A
50	C1	2177	G
50	C1	2219	C
51	C2	23	A
51	C2	255	U

5.4 Non-standard residues in protein, DNA, RNA chains [i](#)

4 non-standard protein/DNA/RNA residues are modelled in this entry.

In the following table, the Counts columns list the number of bonds (or angles) for which Mogul statistics could be retrieved, the number of bonds (or angles) that are observed in the model and the number of bonds (or angles) that are defined in the Chemical Component Dictionary. The Link column lists molecule types, if any, to which the group is linked. The Z score for a bond length (or angle) is the number of standard deviations the observed value is removed from the expected value. A bond length (or angle) with $|Z| > 2$ is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
50	OMC	C1	998	50	19,22,23	2.92	8 (42%)	26,31,34	0.67	0
14	SEP	UR	139	14	8,9,10	1.51	1 (12%)	8,12,14	1.79	2 (25%)
50	A2M	C1	1004	50	22,25,26	3.44	9 (40%)	31,36,39	2.71	10 (32%)
1	SEP	UA	646	1	8,9,10	0.67	0	8,12,14	1.11	1 (12%)

In the following table, the Chirals column lists the number of chiral outliers, the number of chiral centers analysed, the number of these observed in the model and the number defined in the Chemical Component Dictionary. Similar counts are reported in the Torsion and Rings columns.

'-' means no outliers of that kind were identified.

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
50	OMC	C1	998	50	-	0/9/27/28	0/2/2/2
14	SEP	UR	139	14	-	0/5/8/10	-
50	A2M	C1	1004	50	-	0/9/27/28	0/3/3/3
1	SEP	UA	646	1	-	4/5/8/10	-

All (18) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
50	C1	1004	A2M	C2'-C1'	-8.57	1.31	1.53
50	C1	1004	A2M	O4'-C1'	8.40	1.61	1.42
50	C1	1004	A2M	O4'-C4'	-6.57	1.30	1.45
50	C1	998	OMC	C2-N3	6.18	1.48	1.36
50	C1	998	OMC	C6-C5	5.86	1.48	1.35
50	C1	998	OMC	C4-N4	4.91	1.45	1.33
50	C1	998	OMC	C4-N3	4.86	1.44	1.34
50	C1	1004	A2M	C6-N6	4.43	1.45	1.34
50	C1	998	OMC	C2-N1	4.07	1.48	1.40
14	UR	139	SEP	P-O1P	3.27	1.61	1.50
50	C1	998	OMC	C6-N1	3.16	1.45	1.38
50	C1	1004	A2M	O3'-C3'	-3.07	1.35	1.43
50	C1	1004	A2M	C5-C4	-2.98	1.33	1.39
50	C1	1004	A2M	O2'-C2'	2.87	1.50	1.42
50	C1	1004	A2M	C5-N7	-2.75	1.33	1.39
50	C1	998	OMC	O2-C2	-2.74	1.18	1.23
50	C1	998	OMC	C5-C4	2.27	1.48	1.42
50	C1	1004	A2M	C8-N9	-2.26	1.33	1.37

All (13) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
50	C1	1004	A2M	N6-C6-N1	-7.08	102.84	118.35
50	C1	1004	A2M	C5-C6-N6	6.22	136.96	123.43
50	C1	1004	A2M	N3-C2-N1	-5.51	119.98	128.60
50	C1	1004	A2M	C5-C4-N3	-5.42	119.68	126.75
50	C1	1004	A2M	N9-C8-N7	-4.28	108.06	113.91
50	C1	1004	A2M	C2-N3-C4	3.57	120.17	111.75
50	C1	1004	A2M	N3-C4-N9	3.38	132.66	127.08
14	UR	139	SEP	OG-CB-CA	3.34	111.40	108.14
14	UR	139	SEP	P-OG-CB	-3.26	109.31	118.30
50	C1	1004	A2M	C5-N7-C8	3.10	107.91	103.51
1	UA	646	SEP	OG-CB-CA	2.45	110.53	108.14

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
50	C1	1004	A2M	C4-N9-C8	2.19	108.10	105.73
50	C1	1004	A2M	C6-C5-C4	2.14	120.06	117.18

There are no chirality outliers.

All (4) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
1	UA	646	SEP	CB-OG-P-O1P
1	UA	646	SEP	CB-OG-P-O2P
1	UA	646	SEP	N-CA-CB-OG
1	UA	646	SEP	CB-OG-P-O3P

There are no ring outliers.

1 monomer is involved in 1 short contact:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
50	C1	1004	A2M	1	0

5.5 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

5.6 Ligand geometry [i](#)

Of 4 ligands modelled in this entry, 2 are monoatomic - leaving 2 for Mogul analysis.

In the following table, the Counts columns list the number of bonds (or angles) for which Mogul statistics could be retrieved, the number of bonds (or angles) that are observed in the model and the number of bonds (or angles) that are defined in the Chemical Component Dictionary. The Link column lists molecule types, if any, to which the group is linked. The Z score for a bond length (or angle) is the number of standard deviations the observed value is removed from the expected value. A bond length (or angle) with $|Z| > 2$ is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\# Z > 2$	Counts	RMSZ	$\# Z > 2$
63	GTP	CI	1201	64	30,34,34	0.90	2 (6%)	46,54,54	1.80	11 (23%)
65	ADP	CS	1101	-	27,29,29	2.96	9 (33%)	42,45,45	2.09	15 (35%)

In the following table, the Chirals column lists the number of chiral outliers, the number of chiral

centers analysed, the number of these observed in the model and the number defined in the Chemical Component Dictionary. Similar counts are reported in the Torsion and Rings columns. '-' means no outliers of that kind were identified.

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
63	GTP	CI	1201	64	-	3/22/38/38	0/3/3/3
65	ADP	CS	1101	-	-	0/16/32/32	0/3/3/3

All (11) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
65	CS	1101	ADP	O4'-C1'	8.38	1.61	1.42
65	CS	1101	ADP	C2'-C1'	-7.06	1.30	1.53
65	CS	1101	ADP	O4'-C4'	-6.46	1.30	1.45
65	CS	1101	ADP	C6-N6	4.70	1.45	1.34
65	CS	1101	ADP	O3'-C3'	-2.94	1.36	1.43
65	CS	1101	ADP	O2'-C2'	2.93	1.49	1.43
65	CS	1101	ADP	C5-C4	-2.58	1.34	1.39
65	CS	1101	ADP	C5-N7	-2.51	1.34	1.39
65	CS	1101	ADP	C8-N9	-2.22	1.33	1.37
63	CI	1201	GTP	C5-N7	-2.13	1.35	1.39
63	CI	1201	GTP	C2-N3	2.02	1.38	1.33

All (26) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
65	CS	1101	ADP	N3-C2-N1	-5.52	119.97	128.60
65	CS	1101	ADP	C5-C4-N3	-5.02	120.20	126.75
63	CI	1201	GTP	C5-C4-N3	-4.91	120.49	128.46
63	CI	1201	GTP	C2-N3-C4	4.47	120.27	112.30
65	CS	1101	ADP	N9-C8-N7	-4.11	108.29	113.91
63	CI	1201	GTP	PB-O3B-PG	-3.71	120.11	132.83
65	CS	1101	ADP	C2-N3-C4	3.35	119.66	111.75
65	CS	1101	ADP	N3-C4-N9	3.35	132.60	127.08
63	CI	1201	GTP	N9-C4-N3	3.20	132.36	125.94
65	CS	1101	ADP	C4-N9-C1'	-3.17	119.03	126.59
63	CI	1201	GTP	PA-O3A-PB	-3.09	122.24	132.83
65	CS	1101	ADP	N6-C6-N1	-3.03	111.73	118.35
65	CS	1101	ADP	PA-O3A-PB	-2.91	122.85	132.83
63	CI	1201	GTP	C2-N1-C6	-2.90	119.81	125.10
65	CS	1101	ADP	C5-N7-C8	2.86	107.57	103.51
63	CI	1201	GTP	N9-C8-N7	-2.78	108.15	113.39
65	CS	1101	ADP	C3'-C2'-C1'	2.58	106.33	101.43
63	CI	1201	GTP	C5-C6-N1	2.56	119.68	113.19

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
63	CI	1201	GTP	C8-N7-C5	2.56	108.87	104.24
65	CS	1101	ADP	C4-N9-C8	2.46	108.40	105.73
65	CS	1101	ADP	C1'-N9-C8	2.41	132.57	127.14
63	CI	1201	GTP	O6-C6-C5	-2.38	120.29	126.60
65	CS	1101	ADP	C5-C6-N6	2.37	128.59	123.43
65	CS	1101	ADP	C4'-O4'-C1'	-2.26	104.49	109.47
65	CS	1101	ADP	C6-C5-C4	2.15	120.07	117.18
63	CI	1201	GTP	C3'-C2'-C1'	2.14	105.50	101.43

There are no chirality outliers.

All (3) torsion outliers are listed below:

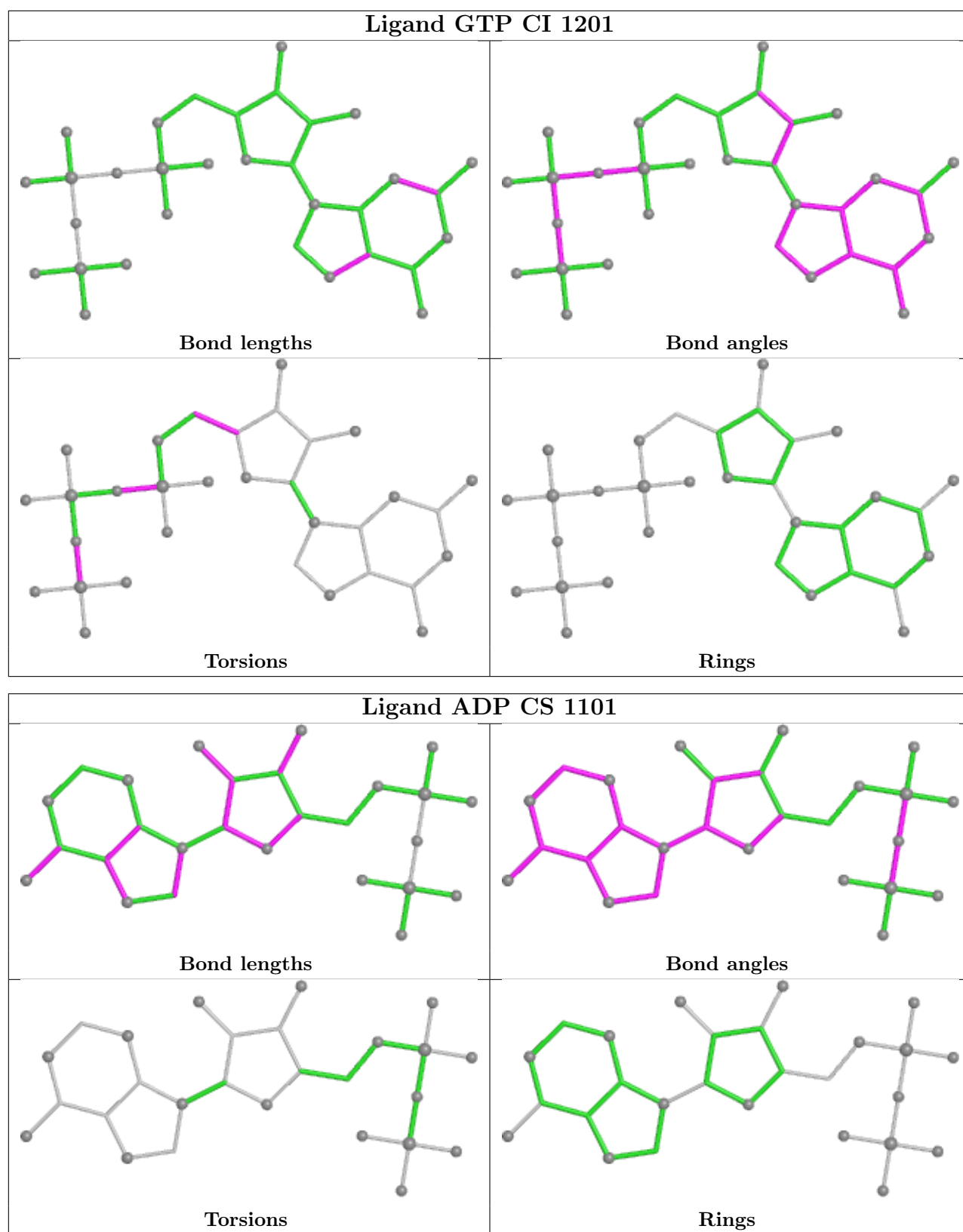
Mol	Chain	Res	Type	Atoms
63	CI	1201	GTP	PB-O3B-PG-O1G
63	CI	1201	GTP	PB-O3A-PA-O2A
63	CI	1201	GTP	O4'-C4'-C5'-O5'

There are no ring outliers.

1 monomer is involved in 3 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
65	CS	1101	ADP	3	0

The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included. For torsion angles, if less than 5% of the Mogul distribution of torsion angles is within 10 degrees of the torsion angle in question, then that torsion angle is considered an outlier. Any bond that is central to one or more torsion angles identified as an outlier by Mogul will be highlighted in the graph. For rings, the root-mean-square deviation (RMSD) between the ring in question and similar rings identified by Mogul is calculated over all ring torsion angles. If the average RMSD is greater than 60 degrees and the minimal RMSD between the ring in question and any Mogul-identified rings is also greater than 60 degrees, then that ring is considered an outlier. The outliers are highlighted in purple. The color gray indicates Mogul did not find sufficient equivalents in the CSD to analyse the geometry.



5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues ⓘ

There are no chain breaks in this entry.

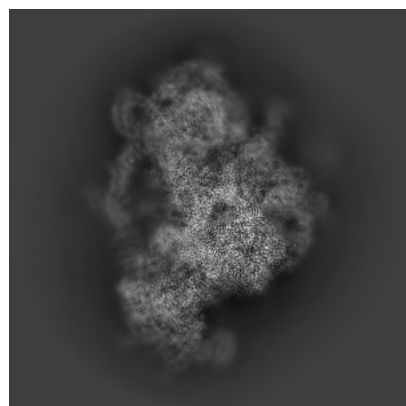
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-66687. These allow visual inspection of the internal detail of the map and identification of artifacts.

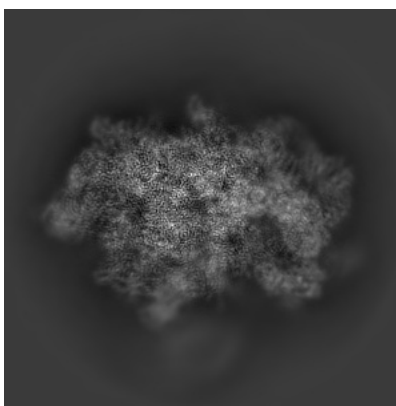
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

6.1 Orthogonal projections [i](#)

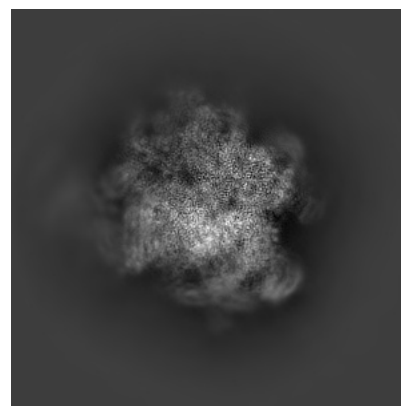
6.1.1 Primary map



X

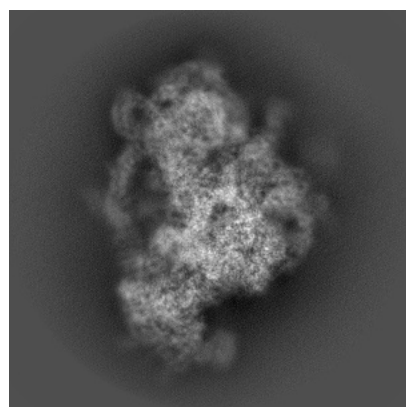


Y

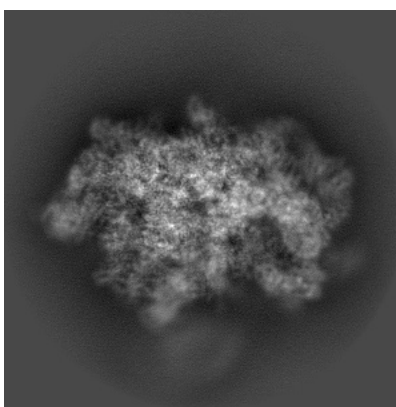


Z

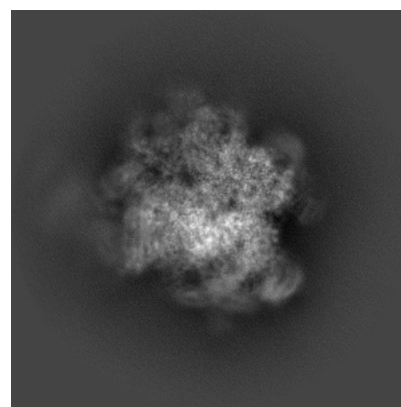
6.1.2 Raw map



X



Y

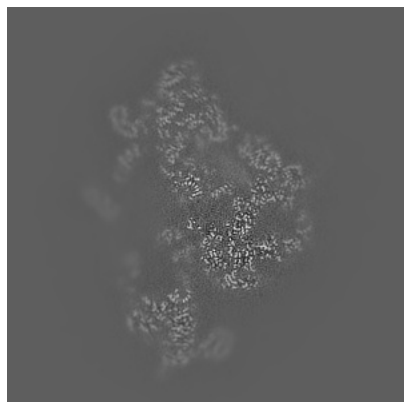


Z

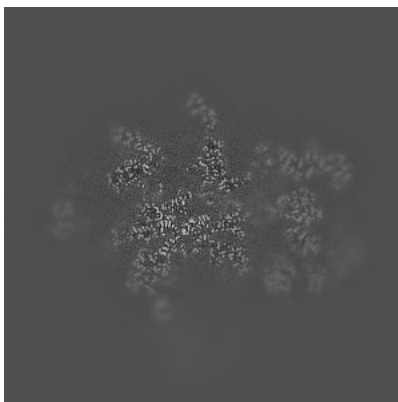
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

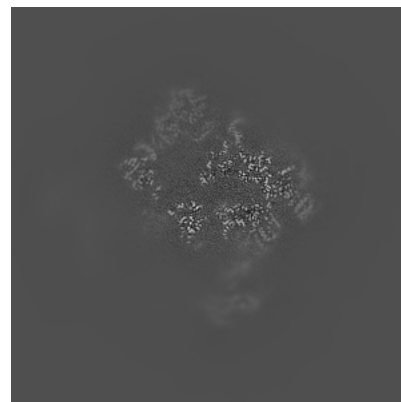
6.2.1 Primary map



X Index: 240

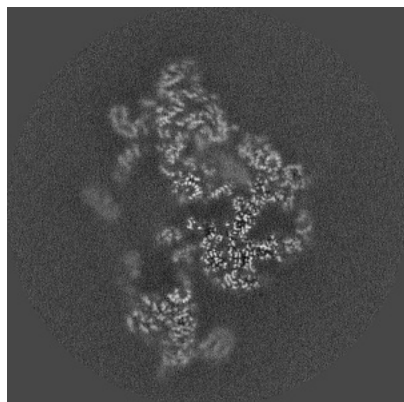


Y Index: 240

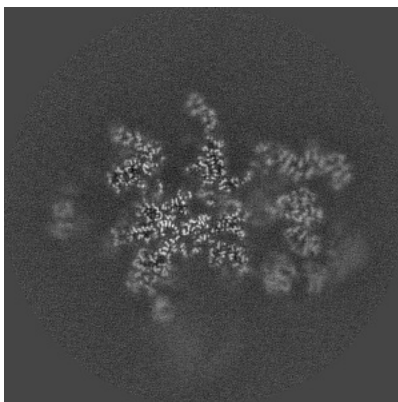


Z Index: 240

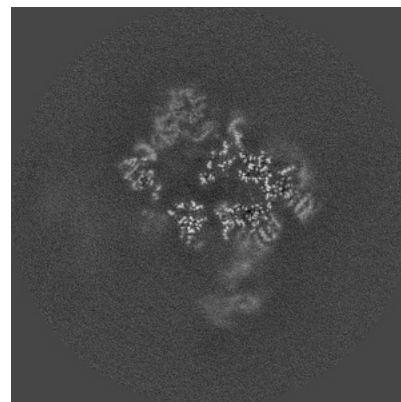
6.2.2 Raw map



X Index: 240



Y Index: 240

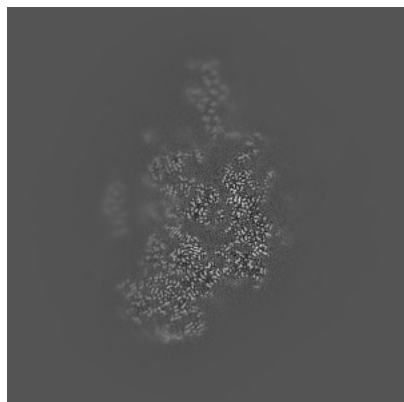


Z Index: 240

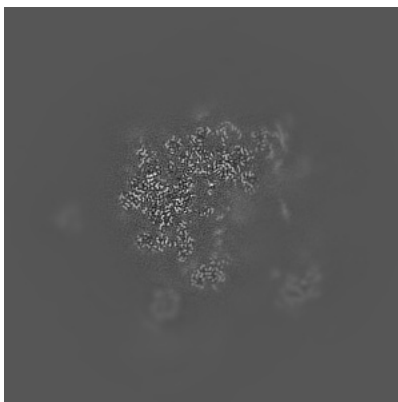
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

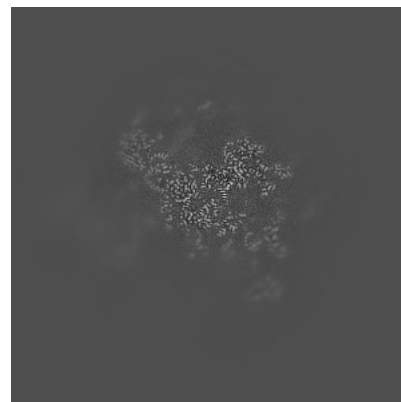
6.3.1 Primary map



X Index: 285

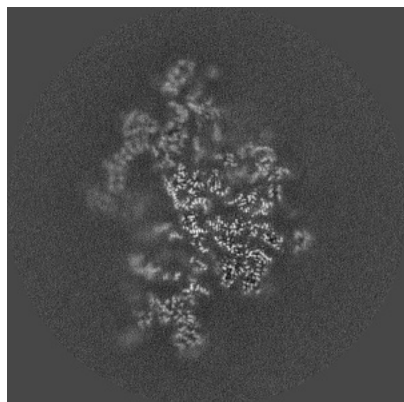


Y Index: 271

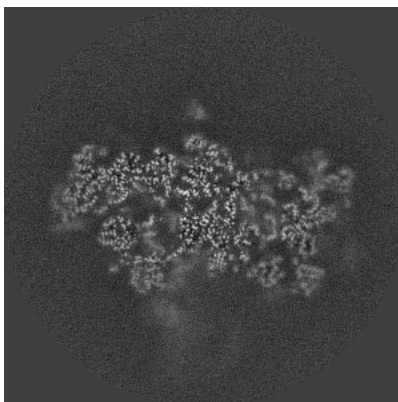


Z Index: 217

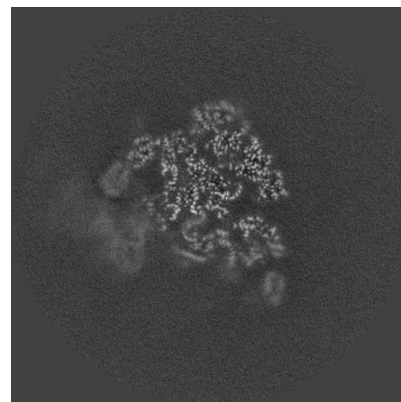
6.3.2 Raw map



X Index: 258



Y Index: 223

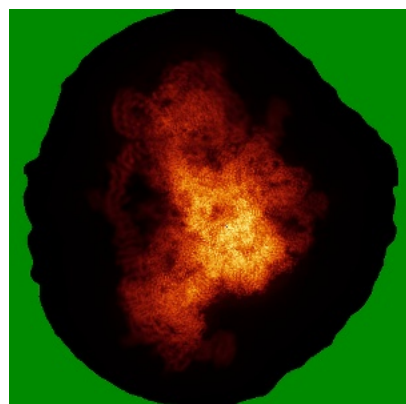


Z Index: 202

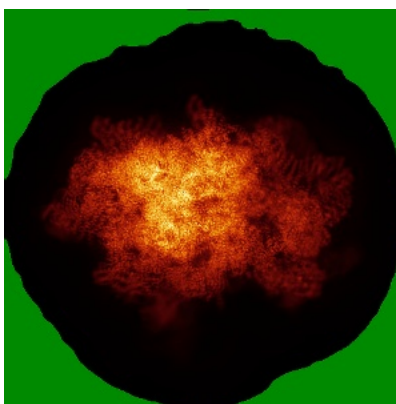
The images above show the largest variance slices of the map in three orthogonal directions.

6.4 Orthogonal standard-deviation projections (False-color) [i](#)

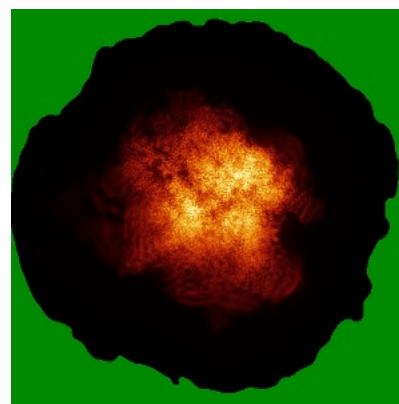
6.4.1 Primary map



X

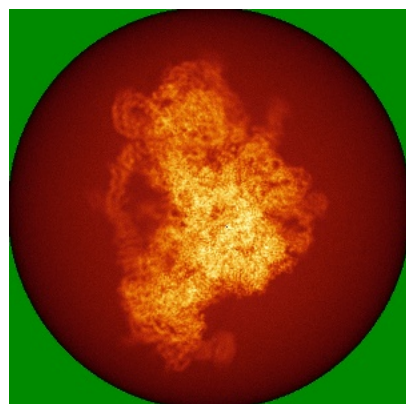


Y

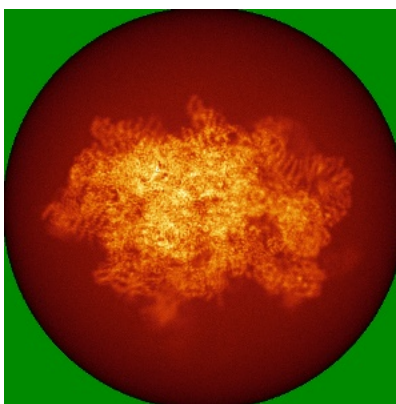


Z

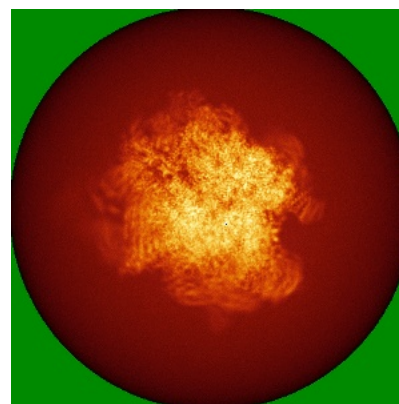
6.4.2 Raw map



X



Y

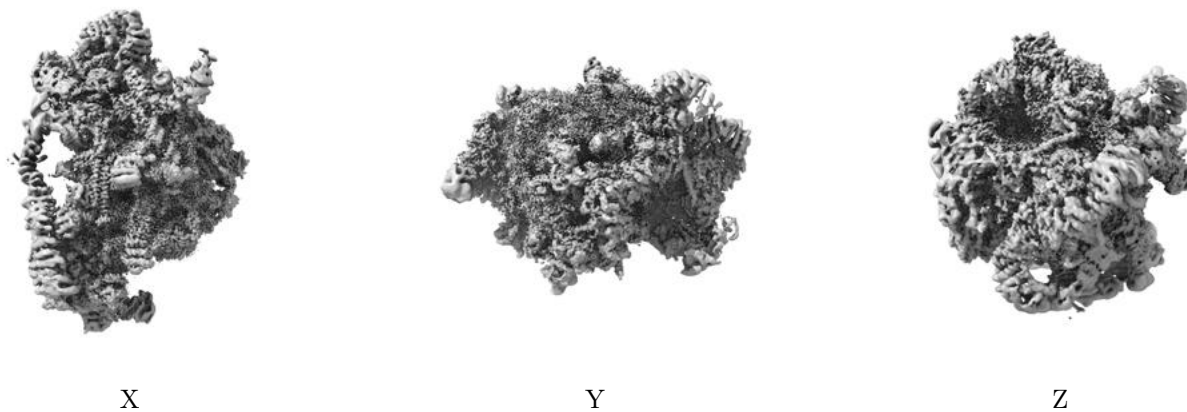


Z

The images above show the map standard deviation projections with false color in three orthogonal directions. Minimum values are shown in green, max in blue, and dark to light orange shades represent small to large values respectively.

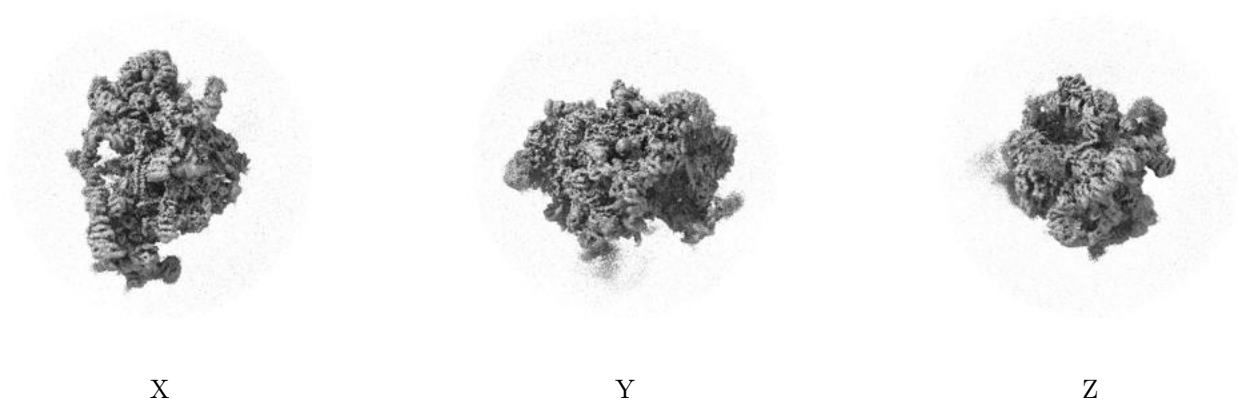
6.5 Orthogonal surface views [i](#)

6.5.1 Primary map



The images above show the 3D surface view of the map at the recommended contour level 0.017. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

6.5.2 Raw map



These images show the 3D surface of the raw map. The raw map's contour level was selected so that its surface encloses the same volume as the primary map does at its recommended contour level.

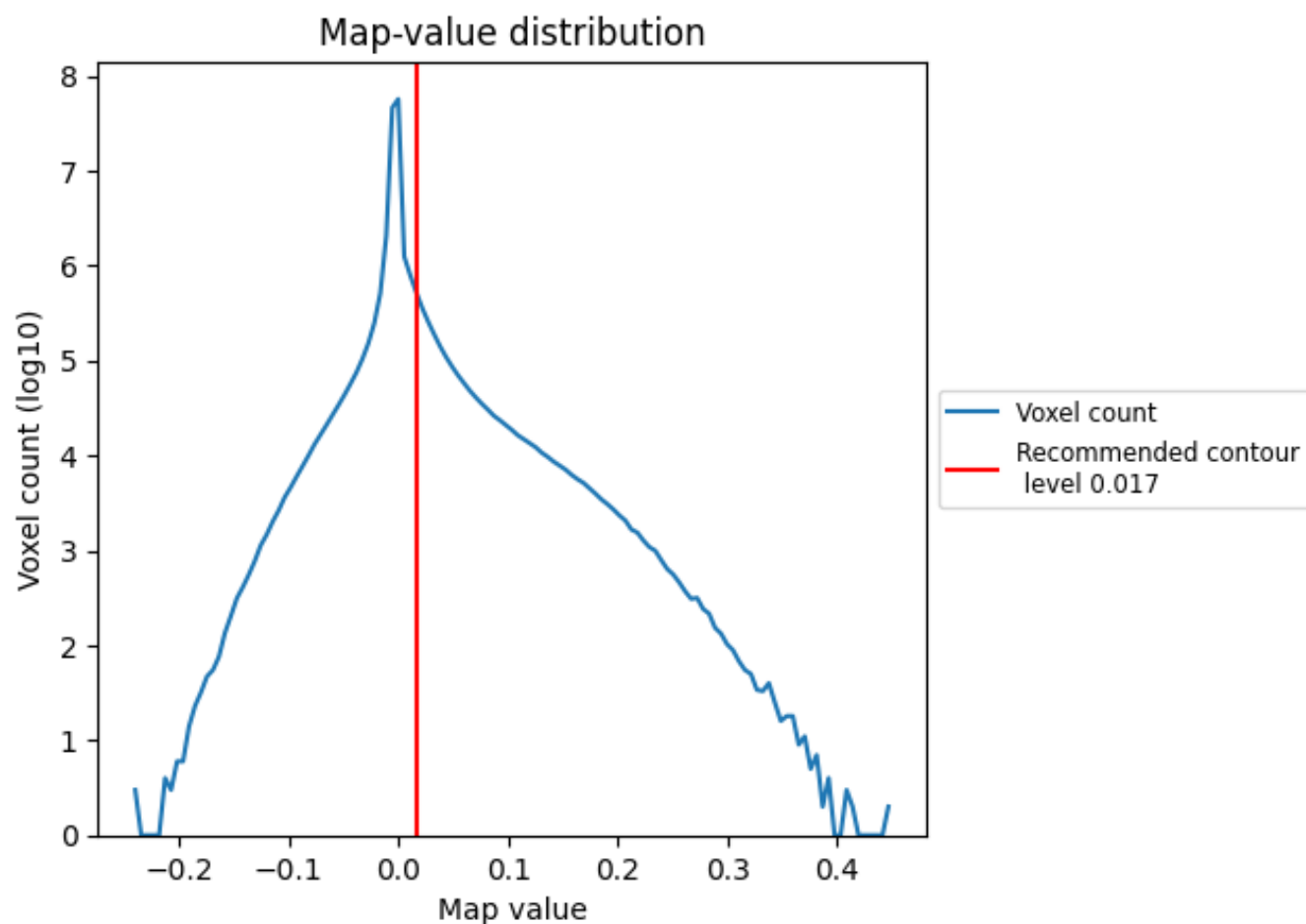
6.6 Mask visualisation [i](#)

This section was not generated. No masks/segmentation were deposited.

7 Map analysis [i](#)

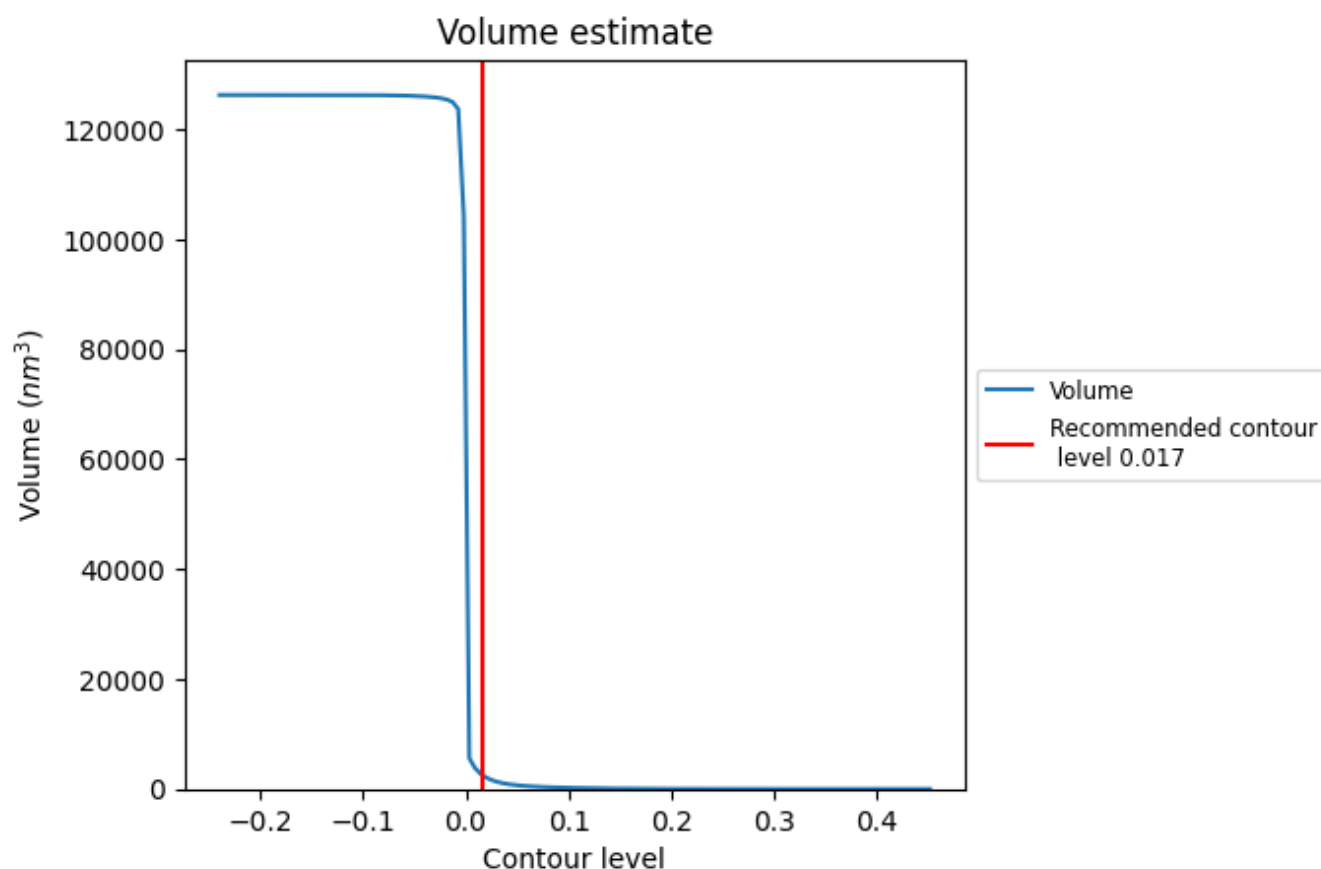
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution [i](#)



The map-value distribution is plotted in 128 intervals along the x-axis. The y-axis is logarithmic. A spike in this graph at zero usually indicates that the volume has been masked.

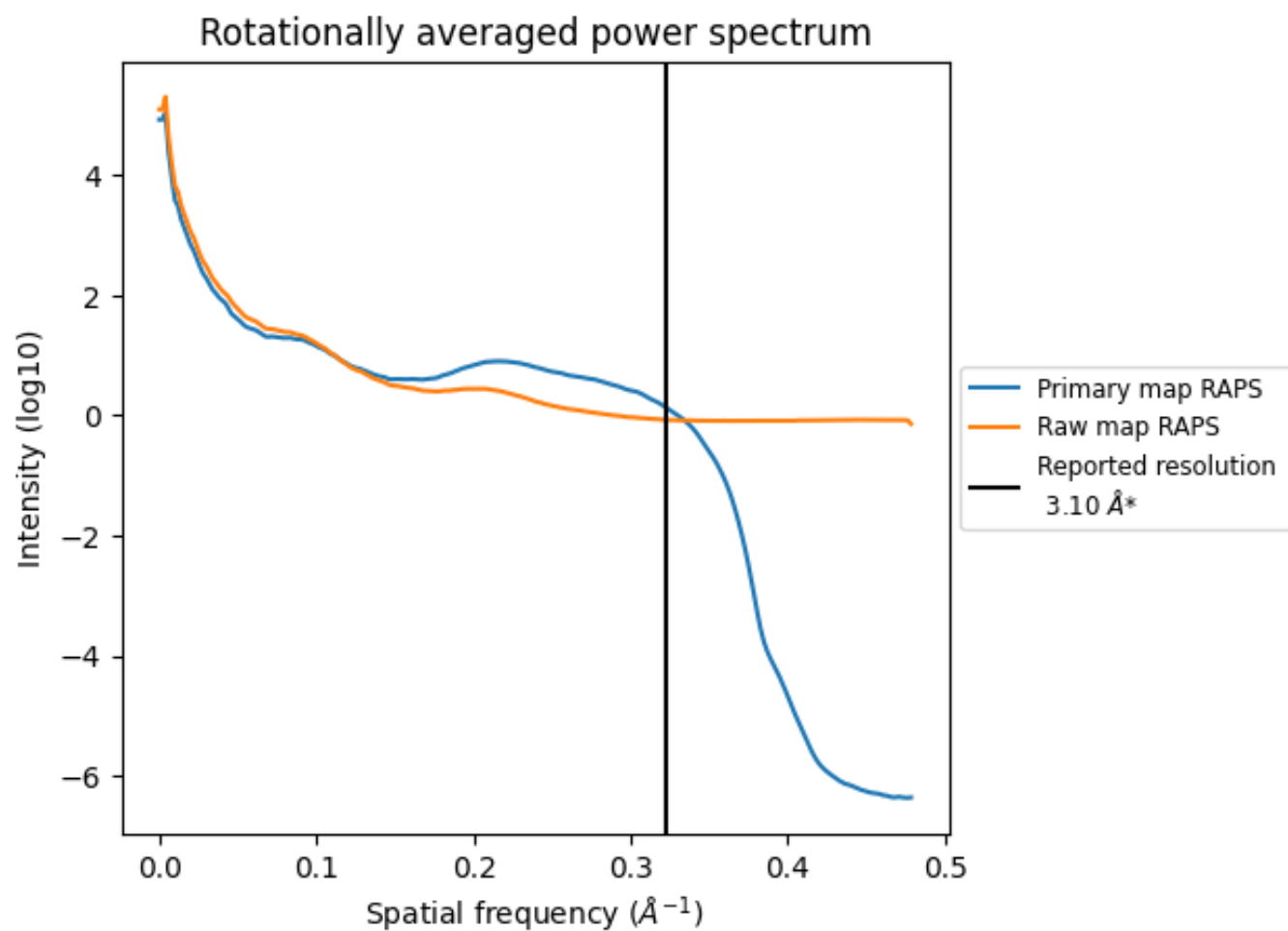
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 2450 nm^3 ; this corresponds to an approximate mass of 2213 kDa.

The volume estimate graph shows how the enclosed volume varies with the contour level. The recommended contour level is shown as a vertical line and the intersection between the line and the curve gives the volume of the enclosed surface at the given level.

7.3 Rotationally averaged power spectrum ⓘ

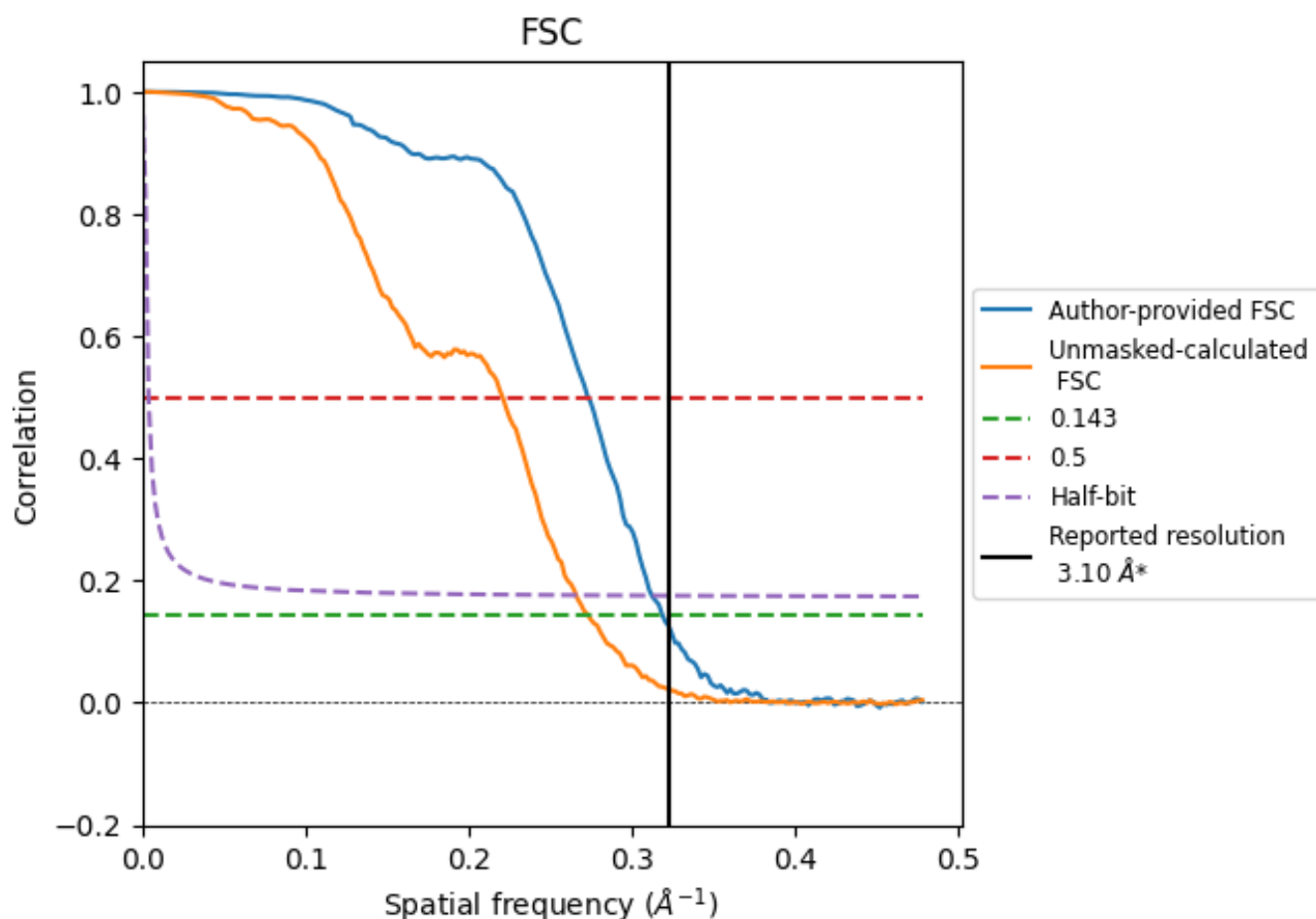


*Reported resolution corresponds to spatial frequency of 0.323 Å⁻¹

8 Fourier-Shell correlation [i](#)

Fourier-Shell Correlation (FSC) is the most commonly used method to estimate the resolution of single-particle and subtomogram-averaged maps. The shape of the curve depends on the imposed symmetry, mask and whether or not the two 3D reconstructions used were processed from a common reference. The reported resolution is shown as a black line. A curve is displayed for the half-bit criterion in addition to lines showing the 0.143 gold standard cut-off and 0.5 cut-off.

8.1 FSC [i](#)



*Reported resolution corresponds to spatial frequency of 0.323 $\text{\AA}^{-1}$

8.2 Resolution estimates [i](#)

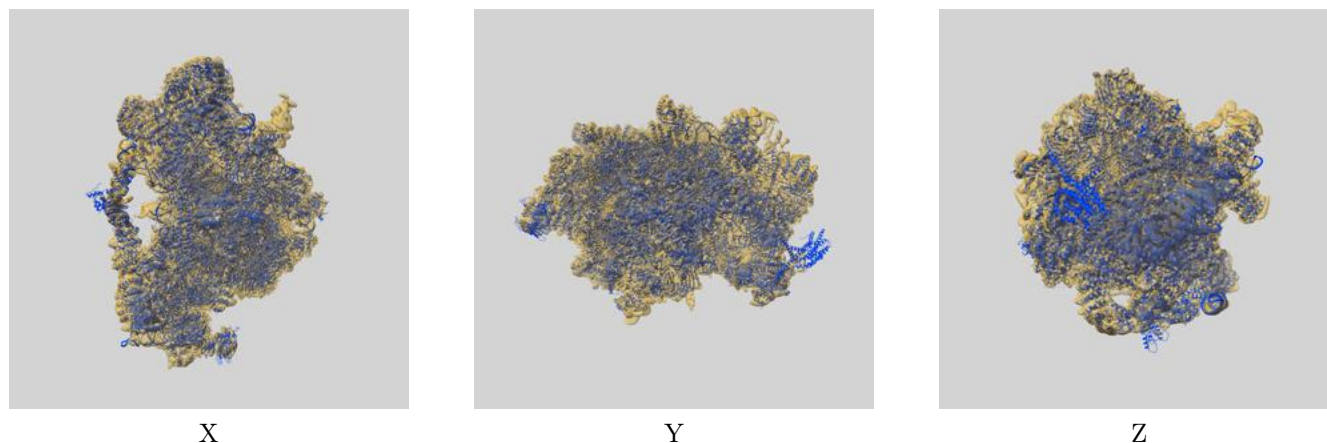
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	3.10	-	-
Author-provided FSC curve	3.13	3.65	3.20
Unmasked-calculated*	3.65	4.52	3.76

*Resolution estimate based on FSC curve calculated by comparison of deposited half-maps. The value from deposited half-maps intersecting FSC 0.143 CUT-OFF 3.65 differs from the reported value 3.1 by more than 10 %

9 Map-model fit [i](#)

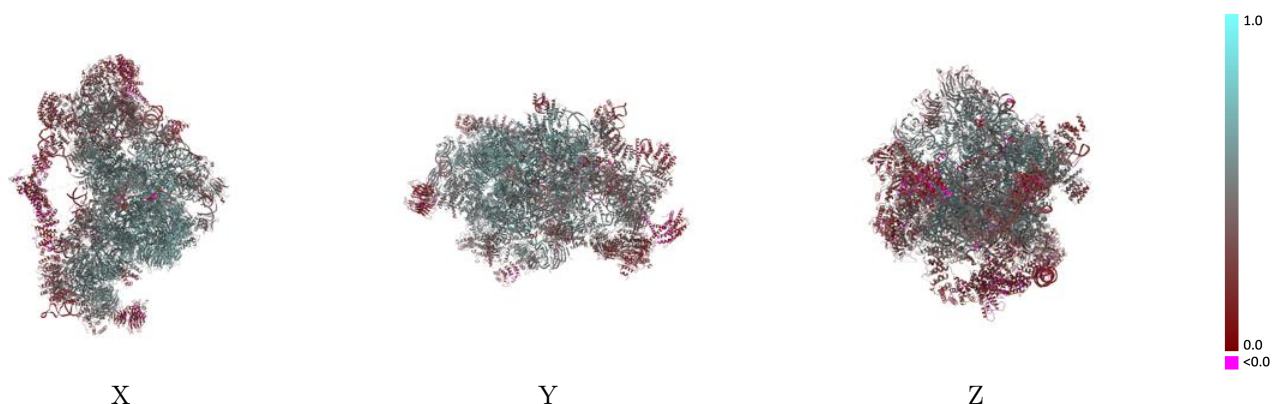
This section contains information regarding the fit between EMDB map EMD-66687 and PDB model 9XAH. Per-residue inclusion information can be found in section [3](#) on page [17](#).

9.1 Map-model overlay [i](#)



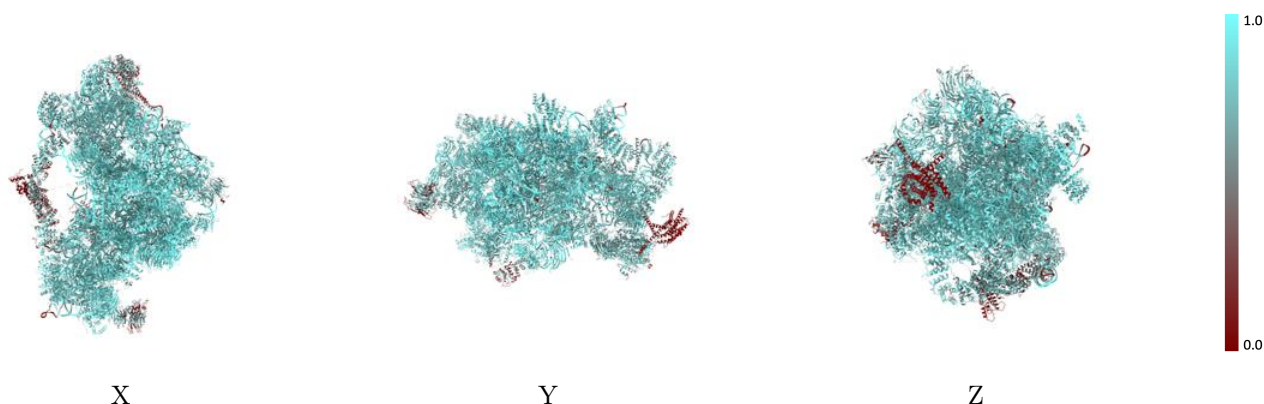
The images above show the 3D surface view of the map at the recommended contour level 0.017 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

9.2 Q-score mapped to coordinate model [i](#)



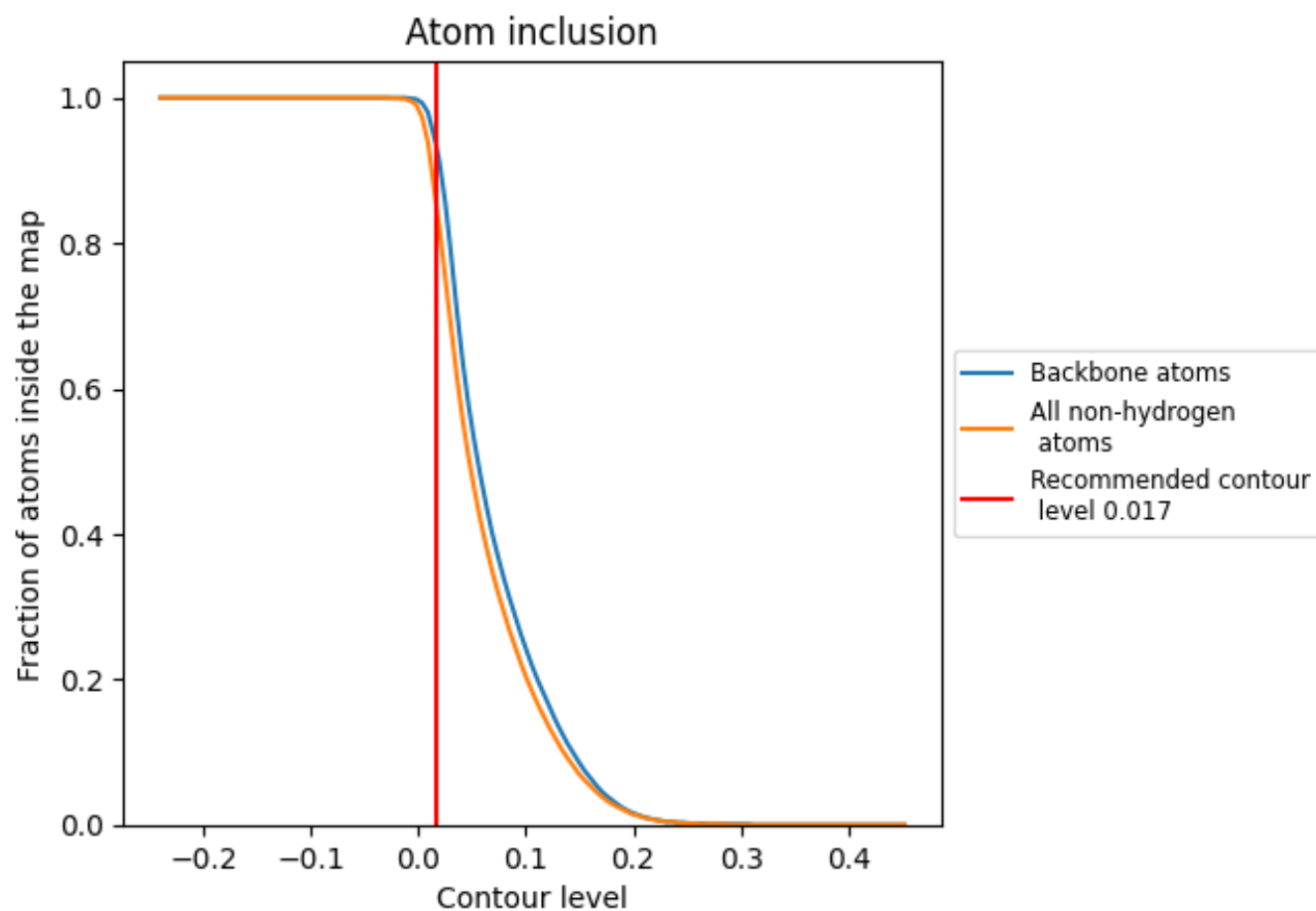
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions at which atoms can be resolved. Low Q-score values may therefore be expected for many entries.

9.3 Atom inclusion mapped to coordinate model [i](#)



The images above show the model with each residue coloured according to its atom inclusion. This shows to what extent they are inside the map at the recommended contour level (0.017).

9.4 Atom inclusion ⓘ



At the recommended contour level, 93% of all backbone atoms, 85% of all non-hydrogen atoms, are inside the map.

9.5 Map-model fit summary ⓘ

The table lists the average atom inclusion at the recommended contour level (0.017) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	 0.8510	 0.4430
C1	 0.9370	 0.4800
C2	 0.9080	 0.4410
CA	 0.9680	 0.5950
CB	 0.8350	 0.4300
CC	 0.9110	 0.4860
CD	 0.8670	 0.4490
CE	 0.9520	 0.5650
CF	 0.9430	 0.5220
CG	 0.8950	 0.4700
CH	 0.9440	 0.5460
CI	 0.9370	 0.5420
CJ	 0.9770	 0.6290
CK	 0.9630	 0.5950
CL	 0.6970	 0.4320
CM	 0.9650	 0.6020
CN	 0.9050	 0.4970
CO	 0.8040	 0.3920
CP	 0.8700	 0.4690
CQ	 0.8750	 0.4330
CR	 0.7900	 0.3650
CS	 0.7150	 0.2660
CT	 0.9400	 0.5600
CU	 0.8810	 0.5050
CW	 0.8440	 0.4350
CX	 0.2060	 0.1360
CY	 0.4030	 0.2290
CZ	 0.1710	 0.1500
Ca	 0.8780	 0.4650
Cb	 0.8420	 0.4160
Cc	 0.9450	 0.5690
Cd	 0.8650	 0.4470
Ce	 0.8060	 0.3760
Cf	 0.8600	 0.4380
Cg	 0.9540	 0.5540



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Chain	Atom inclusion	Q-score
Ch	 0.7680	 0.3480
Ci	 0.9230	 0.5110
Cj	 0.9700	 0.5940
Ck	 0.8440	 0.3930
Cl	 0.7810	 0.3770
Cm	 0.9130	 0.5240
Cn	 0.9800	 0.6040
Co	 0.8350	 0.3880
Cp	 0.9590	 0.5680
UA	 0.9710	 0.6080
UB	 0.8640	 0.4170
UC	 0.4510	 0.3020
UD	 0.9120	 0.5010
UE	 0.8960	 0.4720
UF	 0.9200	 0.4740
UG	 0.9610	 0.5930
UH	 0.6320	 0.2580
UI	 0.8250	 0.3700
UJ	 0.7170	 0.2780
UK	 0.9390	 0.5600
UL	 0.9150	 0.4930
UM	 0.7870	 0.4050
UN	 0.9280	 0.5330
UO	 0.9460	 0.5410
UP	 0.8940	 0.4770
UQ	 0.9150	 0.5110
UR	 0.9560	 0.5790
US	 0.8630	 0.4150
UT	 0.7830	 0.3060
UU	 0.9670	 0.5880
UX	 0.9420	 0.5660
UZ	 0.8700	 0.4180